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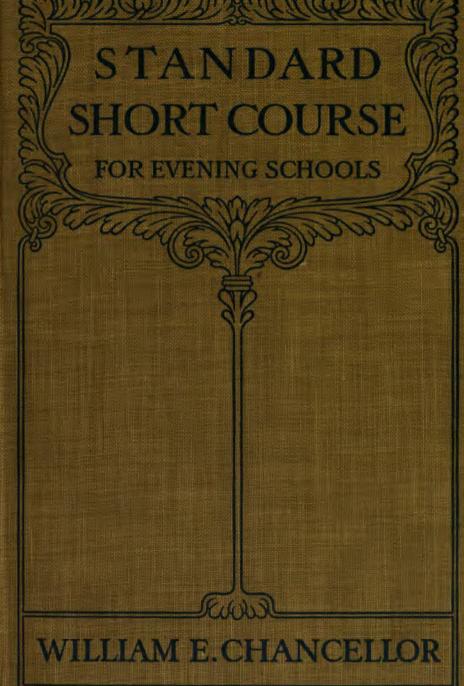
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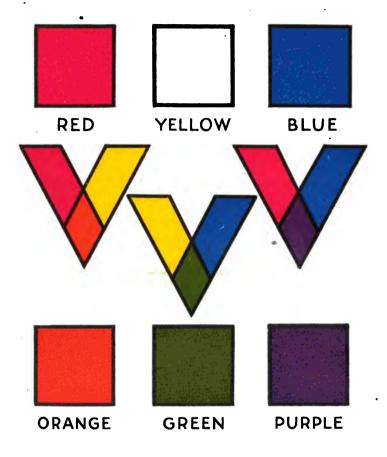


LELAND STANFORD JVNIOR VNIVERSITY



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STANDARD SHORT COURSE FOR EVENING SCHOOLS



Red and yellow make orange; yellow and blue make green; and blue and red make purple. Red, yellow, and blue are called "the primary colors"; orange, green, and purple, "the secondary colors."

STANDARD SHORT COURSE

FOR

EVENING SCHOOLS

BY

WILLIAM ESTABROOK CHANCELLOR

INSTRUCTOR IN POLITICAL SCIENCE, COLLEGE OF WOOSTER, WOOSTER, OHIO FORMERLY SUPERINTENDENT OF SCHOOLS, NORWALK, CONN.





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WILLIAM E. CHANCELLOR.
ENTERED AT STATIONERS' HALL, LONDON.

CHANCELLOR SHORT COURSE.

W. P. g

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the continuous areas to ken.

PREFACE

THE purpose of this book is to present a systematic course of practical elementary lessons in English, including reading, language, and spelling, in arithmetic, in civil government, and in physiology for students in evening schools, especially the foreign-born and the adult beginners. In the past ten years, we have received over seven million new citizens from the countries overseas. A surprisingly large number of them desire instruction in evening schools; but the ordinary primary textbooks are entirely unsuited to their needs, powers, and interests.

For the convenience of towns and cities with evening schools desiring a one-book course, this complete text has been prepared largely from my series of four books issued by the same publishers some years ago and now in use in many schools. The more important additions are in phonics and in spelling, which should be emphasized in the instruction of classes composed of the foreign-born of several nationalities, since sight and sound are the two available means of intercommunication.

In actual practice, it has been found that illiterate or but slightly literate foreigners make rather better progress where several nationalities are placed in rivalry with one another than where each nationality is taught alone. In most evening schools, the separation of nationalities is not only inexpedient because of expense, but also lest it stir up questions of social precedence, to which from our democratic point of view the foreign-born are sensitive. In cities under my supervision, I have seen representatives of as many as forty different nationalities in one school building, and of as many as twenty nationalities in one class.

The progress of literate adults, with good education in their own languages, is rapid after they have mastered English phonics and the spelling of such a list of words as that of one thousand presented here in pages 97–104. Even when they may be conveniently separated into classes according to nationality, in actual experience it has not been found useful to spend much time in translating into their own tongues. The direct method of learning as the child learns is not only natural but best. Let the teacher teach slowly and patiently in English.

Because of the now prevailing compulsory schooling in youth, adult beginners who can speak English are no longer common in our evening schools. But we still find many whose literacy is limited to a vocabulary of but a few hundred words. Generally, they know but little arithmetic beyond counting. It seems necessary to separate these from the foreign-born only when they are well advanced in years and not so quick to learn.

W. E C

STANDARD SHORT COURSE FOR EVENING SCHOOLS

READING

FOR ADULT BEGINNERS

THE ALPHABET

NAMES OF THE LETTERS

$\mathcal{A}_{\mathbf{h}}$	ay	B	ball	\mathcal{C}	face
A .		В		C	
a		b	63	c	
a	- 38	b		c	•
\mathcal{D} de	\mathbf{g}	${\mathcal E}$	wheel ·	J	fan
D	•	\mathbf{E}	_	\mathbf{F}	(Ne)
d		e		f	
d		e		f	

Note. — ç has a soft sound — face, city.
e has a hard sound — cat, coal.

8	READING		
G cage	\mathcal{H} hat	J	fire
··G	$\dot{\mathbf{H}}$	Ι	
9	h	i	ديركز
g	h	i	
J jug	$\mathcal K$ key	\mathcal{L}	lock
J	K	${f L}$	
j A	k g	l	
j U	k al	1	•
$m_{\rm man}$	72 name	0	oar
M	N William	0	•
m 🐧	N William n Howard	o	
m II	ⁿ Taft.	0	
\mathcal{P} pear	2 quail	R	rope
P	Q	R	
h ()	9	r	
p	q	r	

Note.—ġ has a soft sound—cage, gem.
g has a hard sound—goat, game.

q is a letter that, in the English language, is always followed by another letter, u. Other words with q in them are queen, squeal, quart, question.

8	safe	J	top	\mathcal{U}	mule
S s		\mathbf{T}		U	
1	Fo	t t	Å	u	
8		t	8	u	
V	vine	W	watch	X	ax
V	d.	W	•	\mathbf{X}	^
V v		w		x	d
v	•	w		x	
	y fly Y		<i>2</i> z	zebra	
	y A		3		6
	,	100	· ·	区约	•
	y		${f z}$		

Note. — These letters of the English alphabet represent many more sounds than their number seems to indicate. There are twenty-six letters. The language has forty-four distinctly different sounds, and in all eighty and more different sounds, of which some, however, are but slightly different from the others. The letters b, k, m, n, p, q, r, t, v, and w have each but one important sound to be learned.

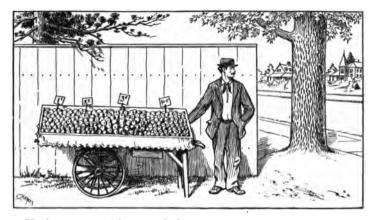
ENGLISH ALPHABET

A	a	α	a	N	n	\mathcal{N}	n
		B		0	0	0	o
\mathbf{C}	c	\mathcal{C}	c			p	
D	d	\mathcal{D}	d	Q	q	2	G
E	e	${\mathcal E}$	e	\mathbf{R}	r	R	r
F	f	\mathcal{J}	f	S	8	S	s
G	\mathbf{g}	G	g	T	t	J	t
Н	h	H	h	Ū	u	\mathcal{U}	ш
I	i	J	i	v	v	V	v
J	j	J	j	\mathbf{W}	w	W	w
K	k	K	k	X	x	χ	x
${f L}$	1	\mathcal{L}	l	Y	y	Y	y
M	m	m	m	\mathbf{Z}	\mathbf{z}	2	3

In these words each letter in roman type has its alphabet sound:

ate	face	dry	date	hold	me
go	${f tim}{m e}$	pole	$\mathrm{ja}y$	kind	box
mule	vote	quite	wife	rope	adz

The apple The man The oak The tree I ate an apple. The apple is good.



He is a man. The man is large.

An apple A man A cent A cart

SOUNDS OF THE LETTERS

- 1. ā āpe lābõr
- 2. a add am fat
- 3. â câre pâr'ent
- 4. ä ärm fä'ther
- 5. a all talk

In the English language, e is often silent. It shows that the vowel before it in the syllable is long, — āte, āt, hāte, hāt.

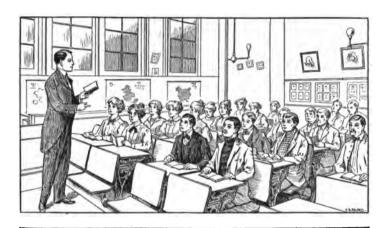
Here are four less important sounds of a:-

- 6. å sĕn'ate prĕf'ace
- 7. ă fī'năl hŭş'bănd
- 8. å åsk dånce
- 9. à số fà à bound'

I can talk English. Can you talk English? We can all talk English.

This is my book. You have a new book.

He has an old book. Here is the old book.



Sounds of the Letters (continued)

b has but one sound, — as in boy, cab Sometimes, b is silent, — as in thumb (pronounced thum). c has two important sounds, —

- 1. c (= s in sun) cent nīce
- 2. e (= k, which has but one sound) eat ery act ch has three sounds, two soft and one hard, —
- 1. tsh as in much, pronounced mutsh; child, church.
- 2. ch (= sh) ma chine' mustache
- 3. eh (= k) eeho eharacter
 ch is sometimes silent, as in yacht, pronounced yät
 d has two sounds,—
- 1. day bid
- 2. d (= t) looked, pronounced lookt; missed.

I	me	my	I speak to you.
we	us	our	You speak to me.
you	you	your	He speaks to us.
he	him	his	She speaks to them.
\mathbf{she}	her	\mathbf{her}	I speak to her.
they	\mathbf{them}	their	They speak to him.
it	it	its	We all speak English

What is this thing?
What is its name?
Give their boxes to them.

It is a small box. Its name is box. Thank you all.

Sounds of the Letters (continued)

d is sometimes silent, — as in handsome (pronounced han'sum).

dg(=j) ědge jůdge

e has two important sounds, --

- 1. ē ēve sērēne
- 2. ĕ ĕnd mĕt

e has three other sounds, less common, -

- 3. ė crėāte society
- 4. ĕ hēr ĕvēr
- 5. ĕ rēcĕnt nŏvěl
 - f fly staff f = v of (pronounced δv).

g has three sounds, two of which, however, are the same as those of other letters.

1. g gō hug gĕt

g is always hard before a, o, u, and when it is the final letter of a word.

2. $\dot{g} (= \dot{j})$ ģēm rāģe lārģe

g is usually soft before e, i, y; but there are so many exceptions that one must learn each word.

Here is the letter I.

Who am I? The teacher.

I teach. You learn.

Who am I? The learner.

I learn. You teach.

Who are you? I am the teacher.

I will teach English to you.

Who are you? I am the learner.

I will learn English from you.

Americans can speak English.

All of us are now Americans.

This is my desk.

These are your books.

That is your hat.

Those are his books.

Sounds of the Letters (continued)

3. g = zh as in mirage

g is sometimes silent, as in

sign, pronounced sīn, and in gnaw.

gh = \bar{g} at the beginning of words, as in ghost, pronounced $\dot{q}ost$

gh = f at the end of words, as in

laugh, pronounced laf; cough, enough.

gh is often silent, as in high, right, though, daughter.

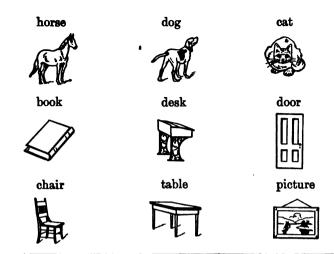
gu = \bar{g} usually, — as in guard (pronounced $g\ddot{a}rd$); \bar{g} uimpe (pronounced $g\check{a}mp$).

gue $=\bar{g}$, — as in rogue (pronounced $r\bar{o}g$); vogue.

h has one sound, as in hat humble abhor h is often silent, — as in honest, hour, John.

i has three sounds, as in, —

- 1. I Ice bind ride
- 2. i ill pit'y tin
- 3. $i=\bar{e}$ in some words machine = $m\dot{a}$ shen'.



Sounds of the Letters (continued)

- j has one sound, as in jam judge reject.
- k has one sound, as in kite elk
- k is silent before n, as in knife (pronounced nif); knot.
- I has one sound, as in lid all help
- l has sometimes a vowel-like sound, as in battle (pronounced bat'l); paddle.
- l is sometimes silent, as in calm (pronounced cam); would.
- m has one sound, as in me am him smile
- n has one sound, as in on ten not in
- m is silent before a final n, -as in

hymn (pronounced him); solemn.

- o has several important sounds, -
- 1. ō ōld nōte gō
- 2. † † bey' pro poşe' sor'row
- 3. ô .ôrb ôr'dêr

I have a new book to-day.

What is the name of my new book?

We do not know.

Is the book yours?

These books are ours.

Those books are theirs.

May I read this old book of yours?

I like this large book of pictures.

It is a good book, but they still read badly. Soon all will read their books well.

Sounds of the Letters (continued)

- 1. th, a thin sound, thin birth breath
- 2. th, a thick sound, then with breathe
- 3. th = t Thomas = Tom $\dot{a}s$

ti = sh nation = nā'shun; Christian

tt = t hatter = hat'er

u has several sounds, -

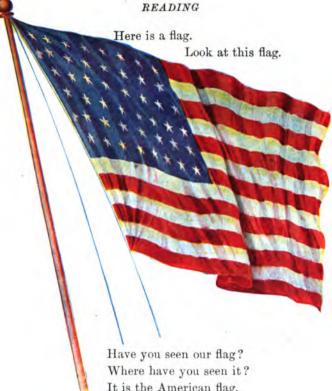
- 1. ū ūse pūre
- 2. ŭ ŭp stŭd'y
- 3. ti ti nīte' hti māne'
- 4. u rude in trude'
- 5. u full put 6. û ûrn con cûr'

v has one sound, as in van love level velvet

w has one sound, as in we swan wax twitter wh = hw what = hwot

x has several sounds, -

- 1. x = ks box (pronounced boks); wax.
- 2. $x = \bar{g}z$ exert (pronounced eg zert'); ex am'ple.
- 3. x = z xebec (pronounced ze'běc).



It is the American flag.
We call it the "Stars and Stripes."
We call it the "Red, White, and Blue."

How many colors has the American flag? How many red stripes has it? How many white stripes has it? The stars on the flag are white. How many stars are on the flag? What part of the flag is blue? I have a flag. We have a flag. Have you a flag? Have they a flag? Where is your flag?

I am a man.	I was a boy.
You are a man.	You were a boy.
He is a man.	He was a boy.
We are men.	We were boys.
You are men.	You were boys.
They are men.	They were boys.

I shall be an old man, if I live long. You will be an old man, if you live long. He will be an old man, if he lives long. We shall be old men, if we live long. You will be old men, if you live long. They will be old men, if they live long.

Sounds of the Letters (continued)

y is often a vowel.

- 1. ÿ whÿ stÿle
- ž pĭt'ğ hăp'pğ
- 3. ỹ zĕph'ỹr mỹr'tle
- y is sometimes a consonant, as in year, young.
- z has usually the sound heard in zeal size z = zh azure (pronounced azh'ure).

Often, we find the vowels, a, e, i, o, u, y, and the semivowel w in various combinations with one another.

- 1. $ai = \bar{a}$ $rain(r\bar{a}n)$
- 2. $ai = \hat{a}$ air (dr)

 $au = \hat{0}$ caught $(k \hat{0}t)$ $aw = \hat{0}$ law $(l \hat{0})$

- 1. $ea = \bar{e}$ beam $(b\bar{e}m)$
- 2. $ea = \delta$ head $(h \check{e} d)$
- 3. ea = I guinea (gin'i)
- 4. $ea = \bar{a}$ break $(br\bar{a}k)$

boy	girl	man	woman
boys	girls	men	women
child	children	father	mother
brother	sister	parent	parents
old	young	live	die
high	low	wake	sleep
large	small	new	old
work	play	\mathbf{big}	little
in	\mathbf{out}	go	stay
act	\mathbf{stop}	far	near
white	black	speak	listen

Sounds of the Letters (continued)

```
beau (b\bar{o})
1. eau = \bar{o}
2. eau = \bar{u}
                     beauty (b\bar{u}'t\bar{y})
1.
                     deep (d\bar{e}p)
     ee = \bar{e}
2.
                     been (bin)
                                          cof'fee (kof'i)
     ee = 1
                     receive (re c\bar{e}v')
     ei = \bar{e}
     ei = \bar{a}
                     vein (vān)
1.
                     people (p\bar{e}'p'l)
     eo = \tilde{e}
2.
                     leopard (lep'ard)
    eo = e
1. eu = \bar{u}
                     deuce (d\bar{u}c)
2. eu = \hat{u}
                     chauffeur (ch\delta f ur)
1. ew = \bar{u}
                     pew (p\bar{u})
                                        ewe (ū)
                     in sew (s\bar{o})
                                        ey = \bar{a}
                                                       they (th\bar{a})
   ew = \bar{o}
                     friend (frend)
      ie = e
1.
     oa = \bar{o}
                     oak (\bar{o}k)
2.
                     broad (brôd)
     oa = \hat{o}
1.
                     hoe (h\bar{o})
     oe = \delta
2.
     oe = \overline{oo}
                     shoe (shoo)
     oi and oy
                         oil boil
                                         boy toy
```

CHANCELLOR - SHORT COURSE -2

I have	I had	I shall have
You have	You had	You will have
He has	He had	He will have
We have	We had	We shall have
You have	You had	You will have
They have	They had	They will have

I have had my dinner.
You may have your dinner.
I cannot have what I wish.
He could not have what he wished.
You might have had your dinner.
They should have had their dinners.

Sounds of the Letters (continued)

	<u>00</u>	$f\bar{o}\bar{o}d$	rōōr	n	
	\widecheck{oo}	$\widetilde{\mathrm{foot}}$	$h\widecheck{o}\widecheck{o}$	p	
1.	ou	out	about	house	
2.	ou =	<u>00</u>	soup ((sōop)	
3.	ou =	ô	broug	ht (<i>brôt</i>)	
4.	ou =	ō	soul ($sar{o}l)$	
5.	ou =	ŭ	couple	e (<i>cŭp'l</i>)	
1.	ow =	ou	in co	w (cou)	
2.	ow =	ō	${\bf know}$	$(n\bar{o})$	bowl (bōl)
1.	ua =	a	guara	ntee (gă	r an $tar{e}')$
2.	ua =	ä	guard	$(g\ddot{a}rd)$	
1.	ue =	ĕ	guess	(gĕss)	
2.	ue =	ū	cue (e	$ar{u})$	
1.	ui =	ī	guile	(ar g ar i ar l)	
2.	ui =	1	build	(bild)	
3.	ui =	ũ	suit (s	sūt)	
4.	ui =	<u>00</u>	recrui	t (re crō	ōt')
	uy=	ī	buy (bī)	

DIRECTIONS

(To be learned word for word and represented in action.)

Go away.

Come here.

Sit down.

Answer me.

Stand up. Read this.

Answer me. Walk in.

Move out.

Be quiet.

Speak loudly.

Please pass a pencil to me.

Write this word. Spell it by letters.

Listen and hear what is said.

Smell this flower. Look at it.

Feel how soft the cloth in this dress is.

Sing do, re, me, fa, sol, la, te, do.

SENTENCES

(For practice in speaking English sounds.)

Do not whisper.

Do not disturb us.

Never lie.

Never steal. Be polite.

Look pleasant. Be part Always think before you act.

Always be kind to your neighbors.

Do your work neatly.

Let us all try to do better each day.

She came quite a while ago.

John is not a bad man.

Susan keeps her clothes clean and neat.

George wears a linen collar.

That is a piece of thin paper, but this piece is thick.

Think before you speak or act.

If at first you don't succeed, Try, try again.



IN THE CORNFIELD

pick'ing	corn	\mathbf{him}	\mathbf{field}	stands	stalk
good	his	has	do'in g	is	$\mathbf{ver'y}$
\mathbf{with}	eat	a bove'	he	like	high'eı

The man stands in a cornfield. He is picking the corn from the stalk. He has an ear of corn in his hand. He will take the corn home with him. Corn is very good to eat.

The cornstalk stands higher than the man. The man has the corn in his right hand. He has the stalk in his left hand. The corn is on the cob.

Where does the man stand? Do you like to eat corn? What is the man doing? What has he in his hand? In which hand has he the ear of corn? Does the corn stand higher than the man?

CLOTHING

coat	col'lar	cuff	trou'sers	boots	but'tons
sleeve	shirt	cloth	foot	my	your
black	\mathbf{made}	where	leath'er	on	are

My boots are on my feet. Your boots are on your feet. Your coat is on your back. Your trousers are on your legs. My boots are black. My coat is made of cloth. My shirt is white. Buttons are on your coat. Your coat has two sleeves. Your boots are made of leather.

What is on your foot? How many boots have you? Where is your coat? Of what is your coat made? How many buttons are there on your coat? How many sleeves has your coat? Is your coat black? Is your shirt white? Where are your boots?

A ROOM

room	door	win'dow	desk	pen'cil	floor
wall	seat	wood	chalk	book	four (4)
\mathbf{smooth}	pa'per	\mathbf{sharp}	of	is	a, an

We are in a room. The room has four walls. The floor is made of wood. The desks are made of wood. The tops of the desks are smooth. The chalk is white. The paper is white. Your pencil is sharp. Your pencil is in your hand. You have one pencil. You are on a seat. You have a book. The room has one door.

How many desks are there in the room? Of what is your pencil made? Of what is your book made? Where is your pencil? How many walls has the room? How many windows are there in the room? Is paper smooth?



THE FIREMEN

1	one	2	two	3	\mathbf{three}	4	four	5	five
6	six	7	sev'en	8	\mathbf{eight}	9	nine	10	ten
en'g	ine	C	ar'riage		team		save	liv	res
driv	'er	fi	re'men		smoke		run	ga	l'lop
stro	\mathbf{ng}	b	uild'ing		burn		fast	ru	${ m sh}$
brav	re	d	an'ger		wheel		steam	pe	r haps'
life		p	ic'ture		crew		fire	ha	r'ness

These horses are running at a gallop. They are big and strong, and they can run fast. The fire engine has a team of three horses. The hose carriage has a team of two horses. The engine has a crew of two men, a driver and an engineer, while the hose carriage has a crew of five men, a driver and four firemen. In this picture, there are five horses and seven men. Perhaps, some building is on fire, and these brave men may save the lives of others and keep the building from burning down.

Three horses and two horses make five horses. The engine has one more horse than the hose carriage.



A HOUSE ON FIRE

pic'ture	house	brick	${f this}$	street	in
fire	fire'men	hat	ax	red	smoke
win'dow	out	\mathbf{w} ho	com'ing	man'y	\mathbf{they}

There are two houses in the picture. One house is on fire. The smoke is coming out of the door. This house has five windows. There are five men in the street. They are firemen. One fireman has an ax in his hand. The fire is hot. This house is made of brick.

How many houses are there in the picture? How many windows are there in this house? How many men are there in the street? Who has the ax? Are the bricks red? Is there a man in the window? How many houses are on fire? Is the house burning fast?



A FARMER

hoe	i'ron	earth	h an'd le	\mathbf{field}	there
a round'	be hind'	hard	\mathbf{soft}	\mathbf{not}	\mathbf{his}

The man has a hoe in his hands. The hoe is made of iron and wood. The handle is made of wood. Iron is hard. Cloth is not hard but soft. The man is in the field. There is a fence around the field. The fence is made of wood. The man's hair is black. His shirt is white. His hat is on his head. His feet are on the earth.

What has the man in his hands? Where is the man? What is around the field? Of what is the fence made? Where is the man's hat? Is iron hard or soft? Has the man a coat on?



IN THE HAYFIELD

horse	hay	load	fork	cart	har'ness
light	wheel	sun	\mathbf{work}	bridge	tree
leaves	brook	wa'ter	leath'er	black	green

There is a load of hay on the cart. Hay is light. Iron is heavy. A man is on the load of hay. Another man is on the ground. The men are at work. The man on the ground is putting hay on the cart. He has a fork in his hands. The horse has the harness on his back. The harness is made of leather. The cart is in the field. A tree stands near the river. The leaves on the tree are green. The cart has two wheels.

Where is the load of hay? How many men are there in this picture? How many legs has the horse? Of what is the harness made? Of what are the wheels made? What stands near the river? What is in the river? What is the color of the leaves? What has the man in his hands?



WASHING

wom'an tub win'dow clothes wash'ing bench shoes ket'tle hoops han'dle burn'ing o'pen

The woman is washing clothes. She is washing them in a tub. The tub is made of wood. The tub is on the bench. The tub has two hoops around it. The hoops are made of iron. The woman has an apron. The window is open. The woman has shoes on her feet. There is water in the tub. The kettle is on the burning fire.

What is the woman doing? Where is the tub? What is there in the tub? How many hoops are there around the tub? Where is the kettle? Of what is the kettle made? What has the woman on her feet? Is the window shut? Where is the tub?



A STABLE

post	tied	rope	horse	hal'ter
pail	ground	wa'ter	clean'ing	brush
four	mane	nose	sus pend'ers	to

The horse is tied to the post. The horse is tied to the post with a short rope. The horse has a halter on his head. The post is made of wood. The pail is on the ground. The pail has some water in it. The pail has a handle. The man is cleaning the horse. The man has a brush in his hand. The man has suspenders on his back.

To what is the horse tied? How many legs has the horse? What has the horse on his head? What is there in the pail? Of what is the pail made? What is the man doing? Where is the brush? What is the man doing with the brush? Has the man a coat on his back?

SPELLING ·

man	my	there	o'pen
head	but'tons	his	horse
leg	your	pic'ture	light
feet	room	fire	leaves
tongue	wall	win'dow	hay
teeth	smooth	house	wheel
hair	road	chim'ney	draw
mouth	door	fire'man	brook
two	seat	out	load
arm	pa'per	brick	sun
eye	write	hat	wa'ter
hand	wood	this	fork
ear	sharp	ax	work
fin'ger	desk	com'ing	leath'er
knee	chalk	street	cart
coat	pen'cil	red	bridge
sleeve	book	man'y	har'ness
black	ground	they	tree
col'lar	four	smoke	green
shirt	hoe	in ·	post
made	a round'	wom'an .	mail
cuff	i'ron	shoes	tied
cloth	be hind'	tub	mane
where	earth	ket'tle	rope
trou'sers	hard	hoops	Eng'lish
foot	han'dle	clothes	nose
flow'er	\mathbf{soft}	wash'ing '	clean'ing
boots	field	bench	sus pend'ers
ver'y	who	that	stalk
on	car'ry	up	pick

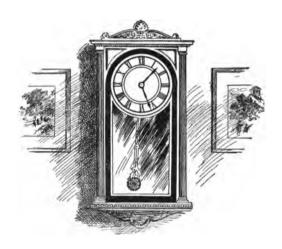


A WORKSHOP

saw	up on'	\mathbf{sharp}	chis'el	vise	ta'ble
wood	\mathbf{shop}	col'lar	plane	wall	floor
a'pron	dull	file	hatch'et	board	cut

The man has a hat upon his head. The man is working. The man has a file in his hand. He is sharpening the saw. We cut wood with a saw. The saw has a handle. The handle is made of wood. The table is made of wood. The vise holds the saw. There is a hatchet on the table. It is dull. There is a chisel on the table. The chisel is sharp. The man has an apron.

What has the man on his head? Where is the file? What is the man sharpening? What do we do with the saw? Of what is the saw made? Of what is the handle of the saw made? What holds the saw? What is on the table? Is the hatchet sharp?



THE CLOCK

clock	fas'tened	hour	min'ute	name	\mathbf{short}
long	past	$\mathbf{b}\mathbf{y}$	six'ty	call	\mathbf{time}
sev'en	\mathbf{week}	year	$\mathbf{fif'ty}$	man'y	which

The clock is fastened to the wall. The clock has two hands. The two hands are called the hour hand and the minute hand. The hour hand is short. The minute hand is long. By this clock it is twenty-seven minutes past one. Sixty minutes make an hour. Twenty-four hours make one day. Seven days make one week. Fifty-two weeks and one day more make one year.

Where is the clock? How many hands has the clock? What are the names of the two hands of the clock? Which hand is long? Is the hour hand short or long? Is there a clock in this room? What time is it now? How many minutes are there in one hour? Of what are the hands made? Do you see the pictures near the clock?



RIDING A HORSE

fast	\mathbf{slow}	run'ning	re volv'er	\mathbf{belt}
walk'ing	$\mathbf{sad'}$ dle	sit'ting	stir'rups	reins
horse'shoe	whip	\mathbf{dust}	\mathbf{holds}	back

The horse is running fast. The man is on the back of the horse. The man has a revolver in his belt. The man is sitting on a saddle. The saddle is made of leather. The man's feet are in the stirrups. The man holds the reins. The man has a whip in his hand. The harness of the horse is made of leather. There are horseshoes on the feet of the horse. He is galloping very fast.

How is the horse running? Is he walking? What are made of leather? On what is the man sitting? Where are the man's feet? How many horseshoes has the horse? Of what are the horseshoes made? Where is the revolver? What does the man hold in his hand? What has the man on his head?



WASHING THE STREET

$\operatorname{cit}'\mathbf{y}$	fence	wa'ter	rub'ber	coat
hy'drant	sweep	hel'met	bak'er	bi'cy cle
brush	\mathbf{broom}	sew'er	cor'ner	street
steps	${f front}$	house	store	\mathbf{sign}
dirt	dis ease'	keep	ev'er y	line
stretch	\mathbf{health}	\mathbf{kept}	wear	\mathbf{small}

The men are sweeping the street with brooms. They are also washing away the dirt with water. The streets of every city must be kept clean from dirt, for dirt means disease.

The street cleaners wear rubber coats, boots, and helmets. A line of hose stretches from the hydrant.

A policeman, a baker, and a small boy are watching the men at their work. They are standing in front of a store with a sign "Fruits and Groceries."

AMERICAN CITIZENSHIP

for'eign	coun'try	\mathbf{right}	a broad'	dif'fer ent
cit'i zen	vote	e lec'tions	Un'ion	for'eign er
be come'	free	state	return'	nat'u ral i za'tion
na'tive	serve	ar'my	pa'pers	pro tec'tion

Every foreigner who comes to this country may become a citizen here. He gives up his old country and takes this new country for his own. When he is a foreign lord, he must give up his title. We have no lords in America. The laws about citizenship are different in the different states of the Union. After being in this country five years, a foreigner may become an American citizen. Then he is under the protection of the United States. He is not a citizen of his native country any more. His native country cannot make him come back. It cannot make him serve in the army. But he must not return there to live. He may vote at all elections in his adopted country. He has all the rights of native-born citizens.

The thirteen original states were:—New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia.

How may a foreigner become a citizen of the United States? What does he give up? From what is he free? How many years must he wait in this country before he can become a citizen? May he return to his native land? When he becomes a citizen of the United States, what must he do? What rights has he? Are the laws alike in all the states of the Union?



A KITCHEN

kitch'en	i'ron ing	\mathbf{left}	rug	full	right
flat'iron	bas'ket	stove	flow'ers	hang'ing	line
stock'ing	heav'y	cold	\mathbf{light}	straw	\mathbf{shut}

The woman is in the kitchen. She is ironing. She has a flatiron in her right hand. She is ironing a shirt. The shirt is on the table. A basket is on the rug. The basket is full of clothes. There is a stove in the room. There are some flowers in the window. Some stockings are hanging on the line. The flatiron is heavy.

On what is the woman standing? Is the flatiron in her left hand? Is the flatiron light? What color is the stove? What is hanging on the line? Is the window shut? What is in the basket? Is the basket made of straw? Is the stove hot or cold? Is the flatiron hot? What is there in the stove? What is on it?



IN THE BUSY CITY

po lice'	car	un'der	ground
po lice'man	thor'ough fare	rails	gate
u'ni form	han'som	e lec'tric	${f light}$
moth'er	bo'a	a side'	globe
sig'nal	\mathbf{crowd}	ve'hi cle	hur'ry
pic'ture	mo'tor	car'riage	o bey'

The policeman is signaling to the people on the street. He tells them when to stop and when to go forward and when to turn aside. The motorman is stopping his car. The thoroughfare is crowded with carriages, motor cars, a hansom cab and other vehicles. The city police wear dark blue uniforms.

At the corner of the block is an electric light with globes. The electric current for the street cars runs underground.

Do you see in this picture the lady with the boa about her neck, and the mother holding her child by the hand? Are they dressed for summer or for winter weather?



THE TAILORS

tai'lor	sew'ing	ma chine'	cloth'ing	clothes
work	lamp	gas	fix'ture	bend'ing
stove	steam	pile	win'dow	glass
bro'ken	wom'en	sleeve	poor	in'dus try
pov'er ty	cheap	\mathbf{shelf}	ten'e ment	house

These eight persons are tailors; and they are making clothes. They use sewing machines in this industry. The clothing is cheap, and these workingmen and workingwomen are poor. These persons are all bending over their tasks. Several panes of glass in one window are broken. A kettle is steaming on the stove. Between the windows, on the wall, is a gas fixture. The room is in a tenement house.

One man has rolled up his shirt sleeves. They are all working as hard as they can to make an honest living.



THE COBBLER

tools	earn'ing	mon'ey	buy	fam'i ly
cob'bler	mend'ing	sole	driv'ing	nails
bread	but'ter	starve	be tween'	break'fast

This man is a cobbler. He is mending a boot. He is putting a new sole upon the boot. He is driving nails into the sole of the boot. His tools are on the bench. The cobbler is earning money. He must have money to buy food. He will buy bread and butter. If he does not have food, he and his family will starve. This man has had breakfast. He will work hard all day.

Who is this man? What is he doing? What has he between his knees? What is he driving into the sole of the boot? Why is the cobbler working? What will he do with his money? Can he live without food? Is this man working before his breakfast? What is on the floor? What is in the tub?

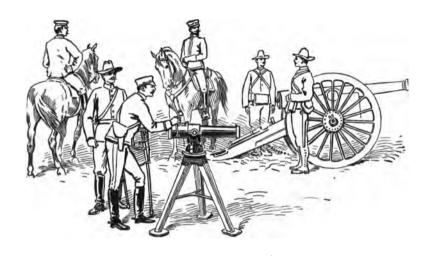


THE BLACKSMITH

black'smith	\mathbf{made}	an'vil	tongs	holes
be cause'	strong	weak	be hind'	forge

This man is a blacksmith. He is making a horseshoe. He holds the horseshoe with the tongs, because the horseshoe is hot. The horseshoe is on the anvil. The blacksmith is a strong man. The fire is behind him. The fireplace is made of bricks. It is called a forge.

Who is this man? What is he making? In which hand are the tongs? Why does he hold the horseshoe with the tongs? Where is the horseshoe? Is the blacksmith a strong man or a weak man? Where is the fire? Of what is the forge made? What is the color of the bricks?

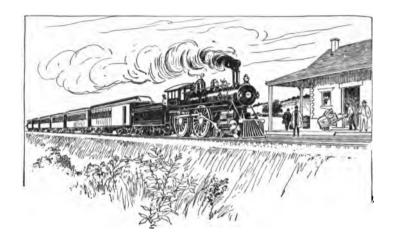


SOLDIERS

sol'dier	horse'back	en'e my	look'ing
bat'tle	stand'ing	pow'der	guns

There are six soldiers in this picture. Two soldiers are on horseback. Four soldiers are standing on the ground. They have two guns. They will fire off the guns at the enemy. The guns have powder and shot in them. One of the guns is on wheels. There are eighteen spokes in the wheel. The soldiers may soon fight in a battle.

How many soldiers do you see? How many horses are there in the picture? Are all the soldiers on horseback? What will the soldiers do with the guns? What is in the guns? How many spokes are there in the wheel? Are both the guns on wheels? At what are the soldiers looking?



TRAVELING BY TRAIN

train	sev'er al	tick'et	${f ride}$	steam
en'gine	con duc'tor	pulls	rail'road	fast
car	sta'tion	\mathbf{mile}	track	col'lects

A man can travel very fast on the railroad. He gets into a train at the station and rides many miles an hour. There are several cars in the train. The conductor collects the tickets. The engine pulls the train over the track. The engine goes by steam. Those who travel should buy their tickets at the railroad station.

How many cars are there in a train? Where does a man get into the train? What must a man buy before he gets into the train? What does the conductor do? What pulls the train? What makes the engine go? Is traveling in the train slow? Where should we buy our railroad tickets? Why should we do this?

EATING

ta'ble	plate	knife	spoon	fork
knife	cup	sau'cer	glass	mouth
food	cof'fee	milk	su'gar	drink

When we eat, we sit down at a table. Each person has a plate, a knife, a spoon, a cup and a saucer, and a glass. I cut my food with my knife. My food is on my plate. I put my food into my mouth with my fork and my spoon. I drink coffee out of my cup and set the cup in the saucer.

What do you put in your coffee to make it sweet? Which do you like the best, coffee or milk? What is the color of milk? What do you do with your knife? With what do you put your food into your mouth? Out of what do you drink water? What things does each person have?

DAILY MEALS

col'or	salt	sup'per	morn'ing	noon
beef'steak	din'ner	\mathbf{soup}	white	but'ter
night	po ta'to	\mathbf{meals}	\mathbf{meat}	ap'ple

I eat breakfast in the morning. I eat dinner at noon. I eat supper at night. Beefsteak is meat. We put butter on our bread. We have three meals a day. The apple is a kind of fruit. The potato is white.

When do you eat dinner? When do you have supper? When do you have breakfast? Which meal do you like the best? Where do we get beefsteak? What is the shape of the apple? What is the color of butter? What kinds of meat do you like?

TRAVELING BY SHIP

\mathbf{ship}	cap'tain	rope	land	thou'sand
wharf	deck	o'cean	crew	pas'sen gers
sails	car'go	\mathbf{sick}	a cross'	great
bot'tom	walk	tied	or'ders	paint'ed
hun'dred	car'ries	\mathbf{rough}	har'bor	b ag'gage

We travel across the ocean in a great ship. The ship carries many hundred people and their baggage. The ship is tied to the wharf by ropes. The water in the harbor is quiet. The water in the ocean is often rough. The ship goes thousands of miles on the water.

The people on the ship are the passengers and the crew. The passengers are traveling. The crew must work to make the ship go. The captain gives the orders to the other officers and the crew.

On the ship we do not see land for many days. The passengers walk on the deck. They have no work to do. Some of the passengers are sick. Many ships are painted black. Some ships go by sails and others go by steam. The cargo is in the bottom of the ship.

In what do we travel across the ocean? Have you traveled across the ocean? From what country did you come? How is the water in the harbor? Who are the people on the ships? Who gives the orders to the crew? Where is the cargo? What makes the ships move? What color are many ships? Do the passengers work? How far can a ship go on the water? Which goes faster, a sailing ship or a steam ship? How is a ship tied to the wharf? Do you like the ships? Do you like better to travel by land or by water?



AT THE POST OFFICE

um brel'la	be hind'	un'der	let'ter	each
stamp	cor'ner	long	short	beard
glass	panes	keeps	rain	\mathbf{wet}

This man is old. He has a basket on his right arm. The old man has an umbrella under his right arm. He has a letter in each hand. The letter has a stamp in the corner. The man's coat is long. He has a beard. The post office is behind him. The window of the post office is made of glass. There are four panes of glass in it. The umbrella keeps off the rain. Rain is wet.

On which arm is the old man's basket? Of what is the basket made? Where is the umbrella? Under which arm is the umbrella? How many letters has the old man? What has each letter in the corner? Is his coat short? How many panes of glass are there in the window?

THE POST OFFICE

clerk	stamp	be fore'	cent	pub'lic
en've lope	ad dress'	gov'ern ment	mail	dis'tance
for'eign	cost	send'ing	news'pa per	wrap'per
post'man	of'fice	thir'ty	brings	out'side'
take	care	in clude'	which	pack'age
man'age	writ'ten	an'y where	$\mathbf{aft'er}$	goes
etc. = et cetera, "and others," or "and so forth."				

We get our letters by mail. The post office takes care of the mail, which includes letters, papers, packages, etc. Sometimes the postman brings them to us. We always like to get a letter from our friends. It costs us two cents to send a letter to any part of this country. We can send a letter to many foreign countries for two cents. The address should be plainly written on the outside of the envelope.

The cost of sending a newspaper anywhere in this country is one cent. We can send a newspaper to any foreign country for two cents. We put the newspaper in a wrapper before we send it. The government owns and manages the post office. The post office is public. Ten two-cent stamps cost twenty cents. Three five-cent stamps cost fifteen cents. The clerk in the post office sells the stamps. How do we get our letters? Who brings them to us

sometimes? Do you have to go after your letters? From what country do you get letters? When did you write your last letter? How many two-cent stamps can you buy for thirty cents? Who sells the stamps? Who owns the post office? How much does it cost to send a letter to Italy? In what do you send a newspaper?

SPELLING

fire'place	pack'age	ta'ble	thou'sand
nee'dle	in clude'	aft'er	be fore'
be yond'	pin'cers	cof'fee	paint'ed
set'ting	sol'dier	sau'cer	po ta toes
car'pet	horse'back	sug'ar	farm'er
cob'bler	stand'ing	bot'tom	pas'ture
mend'ing	en'e my	hun'dred	cat'tle
earn'ing	pow'der	cap'tain	ber'ries
but'ter	look'ing	car'go	cab'bage
mon'ey	en'gine	car'ries	chick'ens
driv'ing	sev'er al	o'cean	veg'e ta bles
be tween'	con duc'tor	pas'sen gers	en've lope
break'fast	sta'tion	bag'gage	for'eign

INDUSTRY AND TRUTH

"Wherever a ship plows the seas, or a plow furrows a field; wherever a mine yields its treasure; wherever a ship or a railroad train carries freight to market; wherever the smoke of the furnace rises, or the whir of the loom sounds; even in the lonely garret where the seamstress plies her busy needle:—there is industry."

-J. A. Garfield, Speech in Congress, 1870.

"All that happens in the worlds of Nature and of Man,—every war, every peace, every election, every life, every death, every success and every failure, all change and all permanence whether of adversity or of prosperity, the perished leaf, the unutterable glory of stars,—all things speak truth to the thoughtful spirit."

⁻Rufus Choate, on "Mental Culture."

THE SKY

day	hours	\mathbf{night}	dark	stars
sun	moon	rise	set	size
bright	clouds	rain	num'ber	twen'ty-four
light	earth	con tain'	\mathbf{called}	dif'fer ent

There are twenty-four hours in a day. Every day is divided into two parts. These two parts are called day and night. Day is light. Night is dark. Men work in the day and sleep in the night. There are many objects to be seen in the sky. The clouds are sometimes light and sometimes dark. The clouds contain water. This water comes down upon the earth as rain.

The brightest object in the sky is the sun. The sun is very large and very hot. The sun keeps the earth warm. The sun is a globe a thousand times as large as the big round earth. The sun rises in the morning and makes everything light. The sun sets at close of day. Then everything is dark.

The stars look very small. Some of the stars are many times as large as the sun. There is a very large number of stars in the sky. The stars are very far away.

How many hours are there in a day? How many hours of the day is it light? How many hours of the day is it dark? What different things are there in the sky? Which is the larger, the sun or the moon? What makes the earth warm? How many stars are there? How many moons does the earth have? Is the moon always round? What do men do in the daytime? When do men sleep? What color are the clouds? What do we get from the clouds? What is the use of the rain?

THE FARM .

lives	oxen	\mathbf{their}	help	cab'bage
barn	cat'tle	cows	grass	chick'ens
eggs	corn	beets	grain	pas'ture
\mathbf{dog}	farm'er	hens	\mathbf{seed}	po ta'to
mow	large	hatch	\mathbf{dries}	veg'e ta ble

The farmer has a house and a barn. He lives in the house. He keeps his cattle and their food in the barn. The farmer's cattle are his oxen and his cows. The horses help him on his farm. The cows give to him milk and meat. The cows have horns. The cows eat the grass in the pasture all day long. The horses eat hay and grain in the barn. The farmer feeds his hens several times a day. The hens give him eggs. The eggs are good to eat. Sometimes, the hens sit on the eggs and hatch chickens from them. The chickens will grow to be as large as the hens.

The farmer has a dog. The dog watches the farmer's house. The farmer raises potatoes, corn, beets, and cabbage. He sells some of these and eats the rest. He mows the grass and dries it. Then he puts it in his barn for the horses. When grass is well dried, it is called hay.

What does the farmer keep in his barn? What do horses eat? What does the farmer get from his hens? What kind of noise does the hen make? Of what use is the dog? How does the farmer make hay? Where does he put the hay? What does he do with his vegetables? Where do the cows stay in the daytime? What do the cows eat? What does the farmer get from the cows? How large are the chickens?

OCCUPATIONS

butch'er	gro'cer	sell	drug ' gist	bak'er
pro vi'sions	tea	wheat	med'i cine	bread
fruit deal'er	ba na'nas	or'anges	ber'ries	quart
pound	pie	ker'o sene'	flour	juic'y

We buy our provisions of the butcher. The butcher sells us meat. We buy our meat by the pound. The grocer sells us tea, coffee, sugar, salt, and kerosene oil. We burn kerosene oil in a lamp. The farmer raises vegetables and wheat. Wheat is made into flour. The baker makes bread out of flour. Bread costs five cents a loaf. The baker also makes pies. Pies are round.

The druggist sells medicines for sick people. He makes the medicines very carefully out of drugs.

The fruit dealer sells fruit of all kinds. From the fruit dealer we buy bananas, oranges, strawberries, plums, apples, and grapes. Bananas are long and yellow. They are not juicy. Oranges are round and yellow. Oranges are juicy. Strawberries are small and are sold by the quart. Oranges are sold by the dozen.

From whom do we buy our provisions? From whom do we buy our bread? From whom do we buy our medicine? From whom do we buy our coffee? Who raises our vegetables? Who raises wheat? What is made out of wheat? What is made out of flour? Who sells apples? What are the colors of apples? How much do apples cost? Do you like oranges? Are all oranges sweet? Which is the larger, an apple or a strawberry? What things can we get from the grocer? What things can we get from the farmer?

THE POLICE

$d\epsilon$ cides'	brass	blue	club	or'der
$\mathbf{ar} \; \mathbf{rest'}$	${f thieves}$	law	\mathbf{fight}	court
pris'on	judge	fine	li'cense	guilt'y
pa trol'	o bey'	charge	lis'tens	dis o bey'
wag'on	cit'y	hall	is'sues	pun'ish ment

The policeman sees that no one disobeys the law. The policeman walks about on the street. He watches everything. He has a blue coat. He carries a heavy club in his hand. He has brass buttons on his coat. When the policeman sees a fight, he stops it and arrests the fighters. The policeman also arrests thieves. He puts them in the patrol wagon and drives them to the station house. Then he takes them to court. There the judge listens to the charge against them. If they are guilty, they may have to pay a fine. Sometimes they have to go to prison.

Every man who sells fruit must buy a license to do so. The office that issues licenses is at the city hall. If the policeman finds a man selling fruit without a license, he will arrest him. If we obey the law, we need not fear the policeman.

What does the policeman do for us? Could we get along without the policeman? What kind of a coat does the policeman wear? What has he on his coat? What does he carry in his hand? What does the policeman do with thieves? What happens to a man if he is guilty? What must a man buy who wants to sell fruit? What will happen to him if he does not buy it? Who listens to the charge against the prisoners? Who decides what the punishment should be?

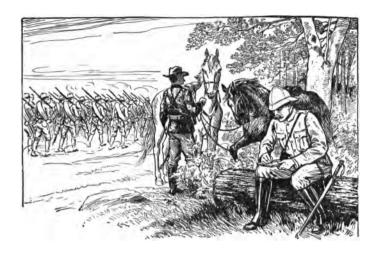
THE SEASONS

spring	sum'mer	fall	win'ter	twelve
sea'sons	months	year	Jan'u a ry	Feb'ru a ry
March	A'pril	May	June	Ju ly'
Au'gust	Sep tem'ber	Oc to'ber	No vem'ber	De cem'ber
cal'en dar	heav'y	week	Christ'mas	plant

There are four seasons, spring, summer, fall, and winter. There are twelve months in the year. Each season has three months. The spring months are March, April, and May. The summer months are June, July, and August. The fall months are September, October, and November. The winter month are December, January, and February. The first month of the year is January. The last month of the year is December.

The winter is cold. The summer is hot. We have ice and snow in the winter. The farmer plants the seed in the spring. We get the fruit in the fall. In the winter, we have to burn a fire to keep warm. In the summer, we do not need to wear a heavy coat. Christmas comes on the 25th of December. We tell the days of the month and of the week by the calendar.

How many months are there in the year? How many months are there in the spring? Which do you like the better, summer or winter? Do you wear a coat in the summer? When do we burn a fire to keep warm? In what season of the year do we get the fruit? When does the farmer plant his seed in the ground? What are the summer months? What is the difference between the summer months and the winter months? In what month does Christmas come? What day of the month is to-day?



THE ARMY

tel'e gram	march'ing	\log	an oth'er
ri'fles	shoul'der	$\mathbf{dust'y}$	coun'try
tired	gen'er al	war	sol'diers
camp	con tains'	sit'ting	com mand'

This is an army marching against the enemy. There will be a battle when they meet. The general is sitting on the log by the roadside. He is writing a telegram to another general. The telegram contains a command. We do not know what the command is. The road is dusty and the soldiers are tired. When night comes, they will stop marching and pitch camp.

Where is the general sitting? What is he writing? Will the other general obey the command? What will the soldiers do when night comes? On which shoulder do they carry their rifles?

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THE BALLOON

bal loon'	gas	\mathbf{than}	light'er	rise
clouds	a bove'	\mathbf{throw}	bas'ket	$\mathbf{peo'ple}$
dan'ger ous	sand	want	high'er	\mathbf{bag}
full	let	\mathbf{when}	moun'tains	air

The balloon is high up in the air. The basket has three people in it. They are above the mountains. The balloon is full of gas. This gas is lighter than air. This makes the balloon rise up above the clouds. There are some bags of sand in the basket. When the men want to go higher, they throw out the sand. When they want to come down, they let out the gas.

Why does the balloon rise up above the clouds? What do the men do when they want to go up higher? What do they do when they want to come down? How high can we go in a balloon? Do you think it is dangerous to go up in a balloon?

SPELLING

gov'ern ment	pun'ish ment	$\mathbf{guilt'y}$	yel'low
send'ing	ba na'nas	tea	tel'e gram
mail	pie	spring	ri'fles
news'pa per	\mathbf{w} heat	sea'sons	camp
brings	or'anges	sum'mer	\log
pub'lic	ker'o sene	months	shoul'ders
dis'tance	win'ter	full	gen'er al
wrap'per	med'i cine	$\mathbf{drug'gist}$	march'ing
out'side!	bak'er	fam'i ly	$\mathbf{dust'y}$
sun	quart	cab'in	war
bright	chil'dren	cat'tle	com mand'
light	ar rest'	juic'y	o bey'
hours	po lice'man	gar'den	bat'tle
moon	pris'on	build'ing	re turn'ing
cloud	brass	la'bor	fin'ished
earth	thieves	wag'on	take
night	judge	daugh'ter	call'ing
day	pris'on er	play'ing	row
set	blue	cook'ing	eve'ning
called	law	fa'ther	fer'ry
stars	fine	moth'er	bal loon'
seize	charge	pan	sky
dark	club	tent	dan'ger ous
butch'er	${f sight}$	met'al	gas
pro vi'sions	li'cense	$\operatorname{\mathbf{gold}}$	a bove'
than	or'der	$\mathbf{wealth'y}$	\mathbf{sand}
come	${f throw}$	soil	light'er
pound	boat	want	high ' er
gro'cer	coast	homes	when
an'chor	rail'road	na'tion al	pitch



THE CANAL

ca nal'	tow'path	mule	walks	dike
dif'fer ence	coal	${f straight}$	from	steer'ing
sec'ond	weeds	be hind'	lon'ger	pa'tient

This is a picture of a canal. The mule pulls the canal boat with a long rope. The mule is different from a horse. The mule has longer ears than the horse. The mule is a patient animal. He walks along the towpath all day long. The man standing on the canal boat is steering it. There is a second boat coming behind the first. The canal boats carry coal. They go across the country for many miles.

What can you see in the picture? What is the boy on the mule's back doing? Do you think the canal boat is going fast? How far behind do you think the second canal boat is? What is the difference between a mule and a horse? Which animal is the better of the two? Does the mule travel as fast as the horse? What is on top of the dike?

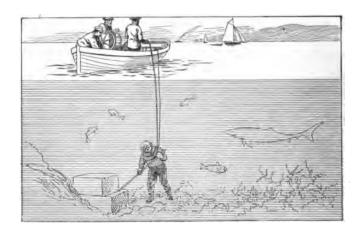


COTTON

cot'ton	sends	ne'gro	South'ern	cli'mate
wo'ven	a way'	seeds .	plant'ed	cloth
spring	deal	quan'ti ty	great'est	crop
thread	ev'er y	spun	New Or'le ans	Eng'land

The negroes are picking cotton in the field. Cotton grows in the Southern states. The climate in summer is very warm there. The seeds are planted in the spring of the year. The city of New Orleans sends away a great quantity of cotton every year. The cotton is sent to the mills, where it is spun into thread. Then the thread is woven into cloth. We send a great deal of cotton to England.

Who are picking the cotton? Are the negroes white or black? What city sends away the greatest quantity of cotton? To what country do we send a great deal of cotton? What two things are made out of cotton?



THE DIVER

foun da'tion	div'er	bridge	rub'ber	build'ing
cov'ers	\mathbf{suit}	b reathe	sup plies'	crow'bar
en tire'ly	\mathbf{tube}	${f through}$	pump'ing	be neath'

The diver can work beneath the water. His suit is made of rubber. His suit covers him up entirely and keeps out the water. The diver can stay beneath the water a long time. He must have air to breathe. The men in the boat are pumping the air down to him through a long tube. The diver is building the foundation of a bridge. He has a crowbar in his hand.

What can the diver do? What kind of a suit has the diver got on? Will the suit let the water in? Who supplies air to the diver? How does the air get to the diver? What is the diver doing with the crowbar? What can you see in the water besides the diver?



A STORM AT SEA

life	beach	storm	$\mathbf{wrecked}$	\mathbf{drown}
rough	ves'sel	sail'ors	struck	safe'ly
brave	coast	wind	waves	sink

There is a storm at sea. The wind is blowing hard. The waves are rough. The vessel has struck upon the rocks. The vessel is wrecked and will sink. The men on the beach are life-savers. These life-savers are brave men. The life-savers will save the sailors and passengers. Some of the men may drown. The life of sailors on the sea is full of danger.

Is the sea smooth? What makes the water rough? What are the life-savers trying to do? Do you think the life-savers can swim? Can they save the vessel? What will become of the vessel? How many men are there on the beach? Do sailors meet with many storms on the sea? Are ships often wrecked in these storms?



THE BRICKLAYER

brick	stick	to geth'er	${f tight}$	trow'el
baked	brick'lay er	earns	wa'ges	\mathbf{lime}
close	mor'tar	wall	clay	lay'ing

The man is laying bricks. He is a bricklayer. He has a brick in his left hand and a trowel in his right hand. He is putting some mortar on the wall with the trowel. Then he will put the brick down close into the mortar. The mortar is wet and soft. When the mortar gets dry, it will be hard. The mortar will make the bricks stick together tightly. Mortar is made of lime and sand. The bricklayer earns good wages. He earns four or five, or even six, dollars a day.

What is the man doing? What has the bricklayer in his left hand? What has he in his right hand? What is he doing with the trowel? What makes the bricks stick together? What does the bricklayer earn?



THE TINSMITH

tin	tin'smith	use'ful	join	melts
eas'i ly	rust	tin'ware	ar'ti cles	cups
mix'ture	sol'der	lead	shin'ing	cook'ing

The tinsmith is working at his bench. He is making tinware. Tin is a shining metal. Tin will not rust. The tinsmith joins the pieces of tin together with solder. Solder is a mixture of tin and lead. It melts very easily and quickly. The tinsmith can make many useful articles out of tin. These articles are used for cooking.

Where is the tinsmith? What is the tinsmith making? What kind of a metal is tin? Will tin rust? What metal will rust? How does the tinsmith join together pieces of tin? What is solder? Why does the tinsmith use solder to join the pieces of tin together? How do we use tinware?

CHANCELLOR - SHORT COURSE - 5



SUGAR

scene	su'gar	chang'es	squeeze	$\mathbf{crushed}$
tall	cut'ting	Cu'ba	sweet	roll'ers
boil	juice	put'ting	\mathbf{short}	sol'id

The sugar cane grows very tall. This scene is in Cuba. Some of the men are cutting the cane. Others are putting it into the carts. The carts will carry the sugar cane away. The sugar cane contains a sweet juice. The men will crush the sugar cane with rollers and squeeze out the juice. Then they will boil the juice until only the solid sugar remains behind. The juice changes into sugar.

Where does the sugar cane grow? Where is Cuba? How many men are there in the field? Are all the men cutting the sugar cane? What are the other men doing? What will they do with the sugar cane? Is the juice sour or sweet? How will they get the sugar out of the juice? How do you use sugar?

THE AMERICAN FLAG

red stripes gov'ern ment
on'ly blue build'ing
school wav'ing thir'teen
stars names na'tion
white now sev'en

Here is another picture of the American flag. It is waving in the wind. Look at the picture on page 19. What are the colors of the flag? How many stripes are there? At first, there were only thirteen states in the nation. There is one stripe for each of those thirteen states. Upon page 37 are their names. There are seven red and six white stripes in the national flag. There is a star for each state in the nation. There are now forty-eight states

in the United States. The American flag waves over every school and over every government building in the country. To love our country is our duty. Let us honor the flag.

Why are there thirteen stripes in the American flag? How many red stripes are there? What waves over every school and government building in the country? What nation owns the American flag? What are the colors in the flag of Germany? How does the French flag differ from the C man flag? Describe the flag of Italy.



THE LIGHTHOUSE

light'house	warn	dan'ger	ves'sels	keep'er
burn'ing	rocks	shal'low	per'il ous	strik'ing
al'ways	bell	dark	ring'ing	a long'

The lighthouse is a tall building. It has a light at the top. This light warns the vessels lest they come too near the rocks. There is a lighthouse at every dangerous place on the coast. The keeper always keeps the light burning at night. Sometimes the lighthouse has a bell. When the sailors hear the bell ringing, they know that they are in danger. Shallow water is perilous to the vessels.

What prevents the vessels from striking on the rocks? What do the sailors do when they see the light? What kind of a building is a lighthouse? At what places are the lighthouses put? What is dangerous to the vessels?

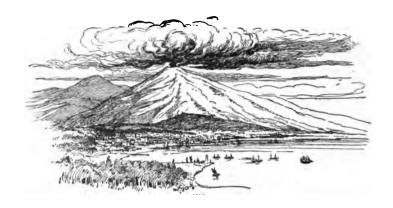


LOGGING

snow	stream	draw'ing	bank	fields
\mathbf{chop}	fire'wood	boards	ground	wood'chop pers
roll	cir'cu lar	branch'es	planks	log'ging

In the winter, the snow is on the ground. Then the farmers cannot work in the fields. They go into the forest and chop down the trees. The horses are drawing the logs to the bank of the stream. The logs will float down the stream until they come to the mill. There a large circular saw will cut the logs into boards or planks. The farmers will carry the branches home for firewood.

At what time of the year do the farmers cut down the trees? Why do they cut down the trees in the winter? How do the woodchoppers get the logs to the bank of the stream? What cuts the logs up into boards? How do the farmers use the branches of the trees? Is the mill up the stream, or down?



THE VOLCANO

vol ca'no	${f red'hot}$	ash'es	\mathbf{smoke}
hun'dreds	la'va	cin'ders	es cape'
hap'pened	ter'ri ble	lost	\mathbf{dust}
heaps	Ve su'vi us	sud'den ly	A'si a

Here is a volcano. The volcano throws out red-hot stones, lava, smoke, and ashes. Lava is melted stones. Lava is very hot. Volcanoes are very dangerous. Sometimes hundreds of lives are lost, and cities are covered up. Sometimes the cinders and ashes cover the earth fifty feet deep. Vesuvius is a terrible volcano. Vesuvius acts so suddenly that sometimes many people cannot escape.

Did you ever see a volcano? What things does a volcano throw out? What is lava? Are volcanoes dangerous? Are you afraid of volcanoes? Do we have volcanoes in North America? Where do we find volcanoes? How deep do the cinders and ashes cover the earth sometimes?

SPELLING

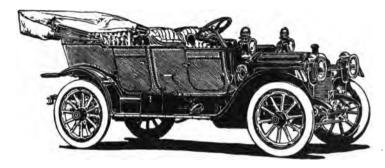
in side'	for'mer ly	lay'ing	al'ways
sells	en tire'ly	dai'ly	shal'low
mill'er	rub'ber	churn'ing	dan'ger
hap'py.	sup plies'	eas'i ly	draw'ing
ca nal'	crow'bar	mix'ture	num'ber
sec'ond	be neath'	sol'der	chas'ing
don'key	ves'sel	use'ful	buf'fa lo
pa'tient	sail'ors	Cu'ba	eat'ing
cot'ton	safe'ly	roll'ers	vol ca'no
ne'gro	mor'tar	sol'id	ash'es
quan'ti ty	to geth'er	wav'ing	sud'den ly
plant'ed	wa'ges	light'house	per'il ous
div'er	es cape'	burn'ing	on'ly
cov'ers	trow'el	boards	hap'pen

THE VILLAGE BLACKSMITH

Toiling, — rejoicing, — sorrowing, Onward through life he goes; Each morning sees some task begun, Each evening sees it close; Something attempted, something done, Has earned a night's repose.

Thanks, thanks to thee, my worthy friend,
For the lesson thou hast taught!
Thus at the flaming forge of life
Our fortunes must be wrought;
Thus on its sounding anvil shaped
Each burning deed and thought!

- H. W. Longfellow,



THE AUTOMOBILE

car	au'to mo'bile	steer'ing	lamp
tour	can'o py	wheel	spring
door	tour'ing	spoke	guard
length	leath'er	seat	tire
ax'le	pas'sen ger	mo'tor	hood
han'dle	gas'o line	horse'-power	step

Here is a forty horse-power motor car. It carries five passengers, and can go at the rate of fifty miles an hour. This kind of automobile is often called a touring car because it can make long trips or tours. It has a canopy of leather. The tires are made of rubber. This five-passenger car has a forty horse-power engine, driven by gasoline. The front wheels have ten spokes each. The driver guides the motor car by the steering wheel. Do you notice the step, the axles, the lamps, the doors, the springs, the seats, and the mud guards of this automobile?

Automobiles cost from four hundred dollars up to seven thousand dollars for standard machines. Some automobiles cost as high as twenty thousand dollars. The picture shows one worth about four thousand dollars.

COAL

fu'el	black	shin'y	be cause'	breaks
ton	eas'i ly	coke	fur'nac es	en'gines
min'ers	sold	hoist'ed	pas'sag es	freight
dug	min'er al	\mathbf{hole}	burned	\mathbf{shaft}

Coal is dug out of the ground. It is found in coal mines. The miners dig down hundreds of feet below the surface of the earth. They cut great passages through the coal. Coal mining is a dangerous occupation, because of the coal gas and because of water in the mines.

The coal is hoisted up the shaft by engines. The engines are run by steam. When the miners have got the coal up on the surface, they put it on freight cars. The freight cars carry the coal all over the country.

Coal is a very good fuel because it gives out a great deal of heat. When coal is burned, a gas is formed. This gas gives us our gaslight. Coal is a black, shiny mineral. It is easily broken up into small pieces. Coal is sold by the ton. A "long ton" of coal is twenty-two hundred pounds. A "short ton" is two thousand pounds. We get a great deal of coal from Pennsylvania. We put coal in our stoves and furnaces and burn it.

Where do we get our coal? Do you burn coal at your house? Do you burn it in a stove or in a furnace? What kind of a mineral is coal? How far down below the surface of the earth do the miners dig for coal? How do they get the coal up to the surface of the earth? Why is coal a very good fuel? How is coal sold? How is the coal carried all over the country? Where do you buy your coal? Is all coal alike?



THE DOG

faith'ful	do mes'tic	friend	a sleep'
guard	re turn'	ev'er y where	watch'ing
world	un like'	fur	mas'ter
fear'less	o be'di ent	child	pro tect'

The dog is a faithful animal. The dog is a domestic animal. The dog is always a good friend to his master. All that he wants, in return for his friendship, is some food with a little kindness. This fearless dog has found a little child asleep. He will guard and protect the child. He is watching the child until his master comes. The dog is always obedient. This dog is larger than the child.

What kind of animal is the dog? Have you a dog? Are all dogs alike? Is the dog the friend of his master? What does the dog want in return for his friendship? Will the dog protect the child? Does the dog obey his master? Is the dog afraid? Is the child awake?

FEATHERS

feath'ers	quill	hol'low	help	fly'ing
la'dies	bon'nets	beau'ti ful	or'na ment	cost'ly
os'trich	Af'ri ca	pluck	$\mathbf{sim'ply}$	cru'el
stuff'ing	pil'lows	cush'ions	wick'ed	a dorn'

All birds have feathers. Feathers help the birds in flying. Feathers also keep the birds warm. Ladies like to wear feathers upon their bonnets. There are many different kinds of feathers. Some feathers are very beautiful and costly. Others are not worth any money, because they are not beautiful.

It is wicked to kill beautiful birds simply to wear them for ornament. Many song birds have beautiful feathers.

The ostrich feather is very long and beautiful. Ostriches grow in Africa. The men pluck these feathers from the birds while they are alive. This is cruel. Formerly, men used the quills of feathers for pens. We use steel pens now. Feathers are useful for stuffing beds, pillows, and cushions. Feathers are very light and hollow. If the feathers were not light, the birds could not fly with them. The feathers keep the birds warm in cold weather and protect them from the rain and snow.

Why do birds have feathers? How can feathers help the birds in flying? Are all the feathers useful? How do ladies use feathers? Why do the ladies adorn their bonnets with feathers? Where does the ostrich grow? Are ostrich feathers costly? Is it cruel to pluck the ostrich feathers? What three things do we stuff with feathers? Why do we stuff pillows with feathers? Is it because the feathers are soft? Why are the feathers hollow?

WATER

liq'uid	dis solve'	things	plen 'ty	nec'es sa ry
shape	col'or less	o'dor	lev'el	taste'less
clear	drink'ing	\mathbf{smell}	hu'man	clean'ing
sol'id	sick'ness	cloth'ing	with out'	veg'e ta bles
cov'ers	boil'ing	fresh	riv'ers	dis'ap pears

Water covers the greater part of the earth. The water in the seas and oceans is salt. The water in the rivers and ponds is fresh. Water is a liquid. Water has a level surface. Water has no shape of its own. Water is colorless and has no odor. Water dissolves salt and sugar. Water will not dissolve coal. Water is used for drinking and for cleaning our clothing and houses. Frozen water is called ice.

We keep away sickness by being clean. Vegetables and plants cannot live without water. If we did not have rain, we could not have potatoes. Boiling water changes to steam and disappears. You can see the steam coming out of a kettle of boiling water. Water is very useful. It is more necessary to human life even than food. We need to drink plenty of water every day.

Is water ever a solid? What is water called when it becomes solid? Do you drink fresh water or salt water? How much of the earth does the water cover? Will water dissolve coal? Will water dissolve sugar? What else will water dissolve? What kind of surface do all liquids have? Why do all liquids have a level surface? Why is water so useful? How do you use water? Do vegetables need water? What does boiling water change to? Have you ever seen a steam engine? Have you seen steam coming out of a kettle of boiling water? Have you ever tasted salt water?

COPPER

eom'mon	these	wire	\mathbf{bend}	e lec tric'i ty
please	no'tice	oth'er	strips	fre'quent ly
cop'per	sauce'pans	$\mathbf{pol'ish}$	boil'ers	con duc'tor
beat'en	$\mathbf{use'ful}$	pure	mixed	ap'pli ca'tion
twist	re moved'	thin	sel'dom	chem'i cals

You may notice that copper is a bright red metal. Copper is seldom found pure. Copper is frequently found in the earth mixed with other substances. These substances must be removed by heat and chemicals before the copper becomes pure and useful. Then the pure copper is beaten into broad, thin strips. These strips are made into saucepans, kettles, boilers, and many other useful articles.

Sometimes, the copper is drawn out into long wire. You can bend and twist this wire any way that you please. The wire will not break. This wire is used a great deal in all the applications of electricity. Copper wire is a fine conductor of electricity. Copper is a very common metal. When we polish copper, it becomes bright.

Of what is a cent made? What is the color of a cent? Does a new cent look like an old cent? What is the difference between the two? Which is the brighter? Is copper frequently found pure? What must be done to the copper before it becomes pure and useful? What is copper beaten into? What articles can be made out of copper strips? Have you ever seen a copper kettle? How is copper made into wire? Why is copper wire so useful? Can you bend and twist copper wire easily? How is copper wire used a great deal? Is copper a rare metal or a common metal? What is the color of copper?



THE SALT MINE

blocks	bus'y	dark'ness	de scend'	get'ting
stairs	salt	mine	can'dles	sur'face
earth	torch'es	below	need	ar'ti cle

These men are getting salt from a salt mine. They have cut their way down below the surface of the earth. They are cutting the salt into blocks with their picks. The stairs down into the mine are cut in the rock. It is hard to see in the darkness. The mine is lighted by torches. Some miners have candles in their hats. It is easy to get lost in the passages of the mine. We need salt for our food. We cannot live without it. But we must not eat too much salt.

How do the miners descend into the mine? Are the miners busy? Would you like to be a miner? How do the miners cut the salt? How is the mine lighted? Can you see easily in a mine? Is salt a useful article? How do you use salt? Can you live without salt?

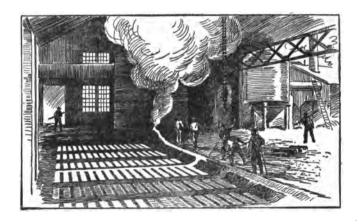
FISHES

point'ed	catch	teeth	back'ward	swal'low
whole	gills	fierce	$\mathbf{greed'y}$	rap'id
move'ment	trout	fins	to'wards	throat
an oth'er	wait'ing	chew .	of'ten	seize
hooks	bait'ed	lungs	de vour'	brooks

Fishes live in the water. They have gills, not lungs, for breathing. They have sharp, pointed teeth. These teeth are turned backward towards the throat. The fishes do not chew their food with their teeth. They only seize their food with their teeth. Then, they swallow their food whole. Fishes have a rapid movement and go through the water very fast. They move through the water with their fins and tails. They are sometimes fierce and greedy. The larger fishes eat the smaller fishes.

We eat a great deal of fish. The fishermen catch them on baited hooks. Sometimes fishermen catch a great many fishes at one time in their large nets. It is good fun to catch fish with hook and line. Often there are trout in the mountain brooks.

Do you like to eat fish? What kind of fish do you like to eat best? What is the largest fish you know of? Have you ever been fishing? What kind of teeth do the fishes have? Do the fishes chew their food before they swallow it? What kind of food do the fishes eat? Do the fishes move through the water slowly or rapidly? How do the fishermen catch the fishes? What is bait? How many fishes can a fisherman catch in his net at one time? Do you like to fish? Do you know how fishes breathe in the water? Why can they not live out of the water?



CAST IRON

\mathbf{best}	\mathbf{worth}	cools	fur'nace	heav'i er
pok'er	$\mathbf{bot'tom}$	stones	chan'nels	wheel'bar row
\mathbf{molds}	plugged	flows	lad'der	rail'ings

Iron is found in the earth, mixed with other substances just as copper is. The iron must be removed from the other substances. It is wheeled to the top of a great furnace in wheelbarrows. In the furnace, it is melted. The iron is heavier than the other substances, and falls to the bottom of the furnace. Then the plug at the bottom of the furnace is taken out. The iron flows out into channels made in the sand on the floor. There it cools.

Which is the better metal, iron or gold? Where is iron found? How do you remove the other substances from the iron? Which is worth more, a pound of gold or a pound of iron? What things can we make out of cast iron?

WROUGHT IRON

s teel	tough	forge	$\mathbf{wrought}$	ham'mered
beams	$\operatorname{\mathbf{arch'es}}$	\mathbf{weld}	chains	strength
$\mathbf{tug'ging}$	bear	\mathbf{must}	brit'tle	ma chines'

Wrought iron is very different from cast iron. Wrought iron is tough. Cast iron is brittle. Cast iron will break easily. Wrought iron will not break easily. We can make wrought iron into almost any shape we please. Wrought iron has great strength. We make chains out of wrought iron because it will bear a great deal of tugging. We can weld two pieces of wrought iron together when we heat them red-hot and then hammer them. The joint is brazed with a flux and hard solder.

Wrought iron is pounded, rolled, or hammered iron. It must be heated red-hot before it can be readily bent. Wrought iron is useful for making beams and arches for bridges and large buildings. We make all kinds of machines out of wrought iron.

Steel is even stronger than wrought iron. The frames of many great buildings are made of steel.

Is wrought iron the same as cast iron? In what way is wrought iron different from cast iron? Which kind of iron is tough? Have you ever been in a blacksmith's shop? What does the blacksmith make wrought iron into? Does the blacksmith heat the wrought iron red-hot? After the wrought iron is heated red-hot, how does the blacksmith change its shape? Can the blacksmith change the shape of cast iron? For what is wrought iron useful? Why are beams and arches made of wrought iron? What is wrought iron? Will wrought iron break easily?

CHANCELLOR - SHORT COURSE - 6

86 READING

LEAD

lead	heav'i er	sheets	flat
lin 'ing	a lu'mi num	cis'terns	shot
tanks	sil'ver	hard'ens	roofs
arts	bul'lets	plumb'er	\mathbf{thin}

Lead is a soft metal. Lead is very easily melted. It is also easily cut with a knife. Sometimes it is rolled out into thin sheets. It can be made into thin sheets by melting it and then pouring it over a flat table covered with fine sand. The plumber likes to use lead because he can cut and bend it so easily. Our water pipes are often made of lead.

Lead also makes a good lining for cisterns and tanks We make bullets and fine shot out of lead. The bullets are used in war and in shooting large animals. We shoot birds with fine shot.

Lead is heavier than silver or aluminum, but lighter than gold. Clean lead shines like silver. Copper, iron, tin, and lead are called the useful metals. Gold and silver are used in some of the arts and trades.

Have you ever seen a plumber at work? Did you ever melt any lead? Can you melt lead very quickly? Did you ever try to cut lead with your knife? How is lead made into thin sheets? Is the roof of your house covered with lead or with shingles? Of what are water pipes made? Why does the plumber like to use lead? What is the difference between bullets and fine shot? For what do we use bullets? For what do we use

What are the useful metals? What are the precious metals? Do you know the price of lead by the pound? What are the prices of other metals?

ICE

ponds	fro'zen	pure	skat'ing
store	float	in'doors	hail'stones
snow	cool'ing	nat'u ral	ar ti fi'cial
al'so	ice'chest	\mathbf{what}	saw'dust
packed	pre serve'	im por'tant	man u fac'ture

In the winter time, the ponds are all frozen over. They are covered with ice. Ice is frozen water. Snow and hailstones also are frozen water. We can go skating on the ponds in the winter time. Ice is lighter than water. Ice floats on the surface of the ponds. In the winter time, men cut the ice and store it in large ice houses. The ice is packed in sawdust to keep it from melting. Ice melts at a temperature of thirty-two degrees Fahrenheit.

In the summer time, the men sell the ice. We put ice in our ice chests to preserve our provisions. We also use ice for cooling drinks. The ice we get from the ponds is natural ice. A great deal of the ice that is now used is made indoors. The ice we get from manufacture is artificial ice. Artificial ice is made from pure water. Sometimes natural ice is not pure. Ice is a very important article. We must have it in summer.

Have you ever been skating? Can you go skating in the summer time? What is ice? Is ice a solid or a liquid? Is ice heavier than water? Where do the men store ice? Why do they pack the ice in sawdust? When do they sell the ice? Have you an ice chest at home? What is natural ice? Have you ever seen snow in the summer time? Do the ponds freeze over in the summer time? Why don't the ponds freeze over in the summer time?

MERCURY

drops	spo'ken	bot'tle	care'ful
spill	four'teen	tem'per a ture	sep'ar ate
near'ly	re mark'a ble	ther mom'e ter	de grees'
\mathbf{warmth}	mer'cu ry	look'ing-glass	ex pands'
scale	flu'id	print'ed	a mount'

Mercury is a remarkable metal. It is a fluid. It is the heaviest metal of which we have yet spoken. We can keep mercury in a bottle. If we should spill the mercury, it would separate into little round drops. Mercury is nearly fourteen times as heavy as water. Mercury is put on the backs of looking-glasses. It reflects pictures like polished silver.

We put mercury in thermometers. A thermometer is a scale with a tube of mercury on it. Heat expands the mercury. When the air becomes warmer, the mercury rises in the tube. When the air becomes colder, the mercury goes down in the tube. Some figures are printed on the scale behind the tube. These figures tell how many degrees the temperature is. Water boils at two hundred twelve degrees. We print this 212° Fahr. (Fahrenheit).

Water is a fluid. Mercury also is a fluid. Every other heavy metal is a solid.

Why is mercury a remarkable metal? Is mercury a solid metal? What will the mercury do if you spill it? How many times heavier than water is mercury? Have you a thermometer at home? Can you tell the amount of warmth in the room by the thermometer? When does the mercury rise in the tube? When does the mercury go down in the tube? At what temperature does water boil? What is on the scale?

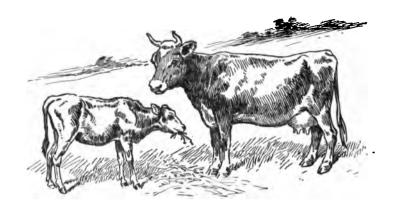
SILVER AND GOLD

ea'gle	pol'ish	pre'cious	case	scarce
scratch	e nough'	cham'ois	\mathbf{mint}	nick'el
tar'nish	watch	fill'ing	dime	quar'ter
brace'let	jew'el ry	den'tist	ring	stamped

Gold and silver are called the "precious metals." Silver is a white metal. It looks like nickel and tin. Silver is heavier than aluminum. Pure silver is not hard enough for practical use. Silver must be mixed with copper to make it tough. Silver can be scratched with a knife. The cases of some watches are made of silver. Other watches have cases made of gold.

Gold and silver are used to make our coins. We have silver dimes, quarters, half dollars, and dollars. Gold money is more scarce than silver money. All the gold and silver money is made in the government mints. The metal is brought to the mint in bars. There it is rolled out, cut into pieces, and stamped. Dentists use gold and silver for filling teeth. We polish gold and silver with chamois. Many ornaments are made of gold. Jewelry is made of gold or silver and other costly materials.

Is your watch made of gold or of silver? Which metal is the more precious, gold or silver? Why must silver be mixed with copper to make it tough? Can you scratch silver with a knife? How can you polish silver? Have you ever seen a gold bracelet? How many cents is a silver dollar worth? How many dimes is a silver half dollar worth? Has the dentist ever put gold or silver in your teeth? Do you like to go to the dentist? Where is all the money made? Who controls the mints in which money is made?



THE COW

stout	$\mathbf{sup}\ \mathbf{port'}$	\mathbf{hide}	\mathbf{chew}	\mathbf{horns}
peace'ful	al read'y	clo'ven	once	hoofs
calf	feed'ing	pas'ture	cud	beef
an'i mal	val'u a ble	eat'en	\mathbf{they}	ev'er

This is a picture of a cow and her calf. They are in a pasture. The calf is feeding. The cow is a very peaceful animal. The cow has short, stout legs to support her heavy body. The cow chews a cud. The cud is food that the cow has already eaten once. The cow has cloven hoofs and two horns. The calf has no horns. The cow is a valuable animal. The cow gives us milk to drink and beef to eat.

Have you ever milked a cow? Do you like to drink milk? Will the calf have horns sometime? What kind of hoofs does the cow have? What does the cow give us? What does the cow chew? Where is the cow? Is the cow a fierce or a peaceful animal? Is the cow a light or a heavy animal?

THE WIND AND THE SUN

set'tle	dis pute'	ques'tion	fa'ble
com pel'	im me'di ate ly	be gan'	a greed'
resist'	tre men'dous	in stead'	fu'ri ous ly
close'ly	fi'nal ly	con'quered	$\mathbf{wrapped}$
${f thought}$	pleas'ant ly	trav'el er	\mathbf{proved}

Once upon a time, so the fable runs, the Wind and the Sun had a dispute that they wished to settle. The question was as to which of the two was the stronger. Just then they saw a traveler coming along the road. They agreed that the one who could first compel the traveler to take off his coat was to be called the stronger.

Immediately thereafter, the Wind began to blow furiously. The Wind thought that the traveler could not resist such tremendous force. But instead of taking off his coat, the traveler only wrapped it more closely around him. Finally, the Wind got tired and stopped.

Then the Sun took his turn. He came out pleasantly and warm. This pleased the traveler and made him feel so warm that he took off his coat. In this way the Sun conquered and proved to the Wind that he was the stronger of the two.

What was the dispute of the Wind and the Sun? How did they agree to settle the dispute? What did the Wind do to make the traveler take off his coat? What did the Wind think? What did the traveler do instead of taking off his coat? How did the Sun try to make the traveler take off his coat? Did the Sun conquer the Wind?

What does this story mean? Is it a true story or a fable? What is a fable?

THE STORY OF A DOG

stole	brook	$\mathbf{greed'y}$	o'pened
$\mathbf{snapped}$	fell	prop'er ty	reach
be longed'	car'ried	\mathbf{world}	per'sons
nei'ther	seized	pass'ing	re flec'tion
bridge	hun'gry	in deed'	dis'ap point ed

A hungry dog once stole a large piece of meat. He was very glad indeed to get the meat. He had seized the meat in his teeth and was running away with it as fast as he could. On his way he came to a brook. As the dog looked from the bridge into the water, he thought he saw another dog with another piece of meat in his mouth.

This piece of meat was just like his own. He was so greedy that he opened his mouth and snapped at the piece of meat that belonged to the other dog. His own piece of meat fell into the water and was carried beyond his reach. The dog was very much disappointed to find that the other dog was simply his own reflection in the water. He had neither his own piece of meat nor the other dog's.

In this world there are a good many persons who are so eager to get the property of others that from neglect or quarreling or greed they lose their own.

What did the dog steal? Did you ever see a dog steal a piece of meat? Why did this dog steal the meat? What was the dog doing with the meat? What did the dog come to on his way? What did the dog see when he looked from the bridge into the water? Why did he snap at the piece of meat that belonged to the other dog? What became of his own piece of meat? Was the other dog a real dog? Have you ever seen the reflection of your face in the water?

THE KIND MAYOR

rag'ged	ped'dling	sta'tion	rail'road
good-look'ing	gen'tle man	or'phan	start
hand'ed	stran'ger	pay'ing	$\mathbf{count'ed}$
may'or	de spised'	mean'ness	at ten'tion
re ceive'	val'ue	sure	an'gri ly

A ragged little girl was peddling apples at the railroad station of a great city. A train was about to start. Just then a good-looking gentleman jumped off the train, and asked the girl for fifteen cents' worth of apples. The girl counted the apples and handed them to him. Suddenly, the train began to move, and the stranger got on quickly without paying for the apples. He gave no attention to her at all, but laughed as she called out for her money.

The mayor of the city was standing by. The mayor was a man who despised all meanness. He looked very angrily after the train. Then he took the little girl by the arm, and led her home with him. You may be sure she received the full value of her apples.

When the good mayor learned that she was an orphan girl without a home, he found a kind family who were glad to take care of her. Every one liked the mayor. He was always friendly. He had many friends among the rich and the poor alike.

What was the ragged little girl peddling? Who bought some apples of the ragged little girl? Did the little girl receive any pay for her apples? How many cents' worth of apples did she give the stranger? What did the stranger do when she called out for her money? Who was standing by? What kind of man was the mayor?

WORLD'S FAIRS

ev'er y	an oth'er	na'tion	ex hib'it
cit'y	world	sam'ple	prod'uct
struc'ture	shel'ter	sep'a rate	arts
peo'ple	trav'el	vis'it	for'eign er
scene	suit'a ble	ap pro'pri ate ly	mer'chan dise

Every few years, one or another nation holds a world's fair. A fair is an exhibit of many kinds of goods. In a world's fair, each great nation exhibits samples of all its best products. In some great city, or nearby, suitable buildings are constructed to house the exhibits, and the grounds are laid out appropriately.

In the United States, we have had fairs in Philadelphia, in Chicago, in Buffalo, in St. Louis, in San Francisco, and in San Diego. Not all these fairs were world's fairs. At the fair at Buffalo, all the nations of the two continents of North and South America had exhibits, and its name was the "Pan-American Exposition."

When nations hold fairs, many persons travel upon trains across lands and by ships across seas to visit them. In this way, men learn what merchandise other men have for sale. Strangers and foreigners become friends. This promotes business between different peoples.

The fairs attract millions of persons as visitors and cost millions of dollars to arrange and maintain. They last usually almost a year.

Why do great nations hold world's fairs? What is exhibited in a world's fair? In what cities of our country have we had great fairs? How do the fairs help business? Do world's fairs cost much money?

THE UNITED STATES

fore'most	re pub'lic	mon'arch y	Con'gress
ac cord'ing	pros'per ous	a're a	square
con sists'	pop'u la'tion	im'mi grants	mil'lions
for'eign ers	won'der ful	Sen'ate	serve
pres'i dent	rep're sent'a tives	e lect'ed	gov'erned

The United States is the foremost republic in the world. A republic is governed by officers elected by the people. A country that is governed by a king is called a monarchy. The United States is perhaps the most prosperous country in the world.

The area of the United States is three and a half million square miles. The population of the United States is over a hundred millions. Thousands of immigrants from all the nations of Europe come into the country every year. It is wonderful how quickly nearly all these foreigners become Americans in spirit.

The president of the United States is elected to serve four years. The laws of the nation are made by Congress. Congress consists of the Senate and the House of Representatives. Every state has two senators. The number of representatives depends upon the population of the state.

How is the United States governed? Is the United States a monarchy or a republic? How is Italy governed? Which is the most prosperous nation in the world? What is the area of the United States? What is the population of the United States? Who come into the country every year? Do these foreigners become Americans quickly? Do you know how many years the president of the United States serves?

NEWSPAPERS

cop'ies	e vents'	ad ver'tise ment	charge
ac count'	com'merce	af fairs'	sports
ed'i tor	re port'ers	pol'i tics	rent
po si'tion	de scribes'	man'a ger	mu'sic
col'umn	news'boys	ad'ver tise	\mathbf{next}

The newspaper is a printed sheet of paper. The newspaper gives an account of all the events of the day. Some newspapers have a great many reporters. It is the business of the reporters to find out what is going on. If there is a great fire in the city, a reporter describes it. The next morning, the paper will give an account of the fire.

The newspaper also tells about commerce, national and foreign affairs, music, politics, and sports. The newspapers contain a great many advertisements. They advertise houses for sale, houses for rent, horses, positions, and many other things. Each newspaper is in charge of editors and managers. Some of the editors write editorials upon public affairs. The newspapers on the street.

Do you read the newspaper? Which newspaper do you read? Did you ever sell newspapers? How many copies can a newsboy sell in a day? What does the newspaper give an account of? Who finds out what is going on? What other things does the newspaper tell about? What do the newspapers advertise? Do you read the advertisements in the newspapers? If you had a house for sale, would you let the newspapers advertise it? Who sells the newspapers? Do you read the editorials in the newspapers? Do you ever advertise in the newspaper? Do you read the "Help Wanted" column?

ONE THOUSAND NECESSARY WORDS

(Practice reading these numbers.)

1.	in	30. pin	59. him	88. lie	117. had
2.	day	31. I	60. ice	89. out	118. sow
3.	go	32. get	61. mix	90. put	119. two
4.	can	33. an	62. own	91. run	120. cup
5.	no	34. car	63. will	92. sin	121. hog
6.	eat	35. saw	64. red	93. top	122. sew
7.	he	36. you	65. now	94. war	123. an'y
8.	are	37. new	66, man	95. hot	124. life
9.	to	38. so	67. boy	96. did	125. hate
10.	try	39. let	68. fell	97. fall	126. song
11.	use	40 . eye	69. gas	98. die	127. thin
12.	of	41. be	70. hat	99. net	128. wake
13.	we	42 . well	71. joy	100. our	129. fine
14.	is	43. ten	72. lay	101. sell	130. give
15.	8.	44. add	73. men	102. tell	131. aunt
16.	but	45. bill	74 . oil	103. her	132. bake
17.	do	46. me	75. pen	104. few	133. date
18.	ear	47. six	76. say	105. bed	134. bear
19.	fix	48. the	77. tax	106. dull	135. club
2 0.	if	49. got	78. was	107. far	136. girl
21.	on	50. one	79. arm	108. may	137. hair
22 .	pay	51. wet	80. ball	109. pie	138. cent
2 3.	see	52. and	81. cat	110. she	139. dark
24 .	win	53. big	82. buy	111. ton	140. part
25 .	am	54. yet	83. has	112. leg	141. rain
2 6.	ill	55. old	84. lot	113. sky	142. safe
27 .	not	56. fall	85. end	114. way	143. true
28.	off	57. act	86. dog	115. how	144. vote
2 9.	up	58. bad	87. hall	116. low	145. who

146. year	178. done	210. felt	242. were	274. what
147. over	179. earn	211. hope	243.' soil	275. pipe
148. none	180. fact	212. line	244. this	276. weak
149. past	181. press	213. made	245. mill	277. your
150. said	182. rent	214. near	246. love	278. half
151. talk	183. than	215. wall	247. keep	279. four
152. late	184. wake	216. ride	248. grew	280. best
153. kind	185. nice	217. same	249. heal	281. hill
154. jail	186. pain	218. tree	250. five	282. land
155. inch	187. room	219. food	251. beat	283. more
156. heat	188. ship	220. bank	252. coal	284. free
157. gold	189. glad	221. gone	253. law	285. when
158. flow	190. foot	222. paid	254. dear	286. plan
159. been	191. need	223. real	255. fair	287. nine
160. chair	192. wash	224. sent	256. meat	288. sign
161. deep	193. yard	225. tire	257. shoe	289. take
162. lung	194. road	226. with	258. they	290. wise
163. feel	195. same	227. meet	259. wood	291. feet
164. gave	196. rest	228. fish	260. urge	292. beef
165. pork	197. soul	229. gray	261. nose	293. cook
166. walk	198. wife	230. hear	262. sick	294. down
167. ver'y	199. felt	231. fork	2 63. time	295. face
168. turn	200 . hard	∩32. boat	264. milk	296. lung
169. next	201. cold	233. clay	265. fear	297. know
170. pear	202. book	234. dime	266. dress	298. help
171. rich	203. won	235. ever	267. corn	299. west
172. seen	204. noon	236. leg	268. bore	300. poor
173. hide	205. mean	237. high	269. head	301. snow
174. good	206 . laid	238. lift	270. like	302 . word
175. find	207. debt	239. make	271. seen	303. work
176. blue	208. cost	240. neat	272. pure	304. nail
177. care	209. blow	241. ring	273. nut	305. must

306.	pig	338.	lend	370.	told	402 .	man'y
307.	show	339. :	mine	371.	which	403.	i'dle
308.	that	340.	sold	372 .	horse	404.	knew
309.	hand	341.	read	373 .	floor	405.	luck
310.	glass	342. •	took	374.	bus'y	406.	du'ty
311.	sing	343 .	un'der	37 5.	flour	407 .	star
312.	\mathbf{dead}	344 .	\mathbf{went}	376 .	in'to	408 .	\mathbf{seem}
313.	side	345.	soap	377.	large	409 .	where
314.	thaw	346. 1	\mathbf{them}	378.	moon	410.	grand
315.	wide	347.	most	379.	false	411.	child
316.	form	348. 3	long	380.	watch	412 .	eight
317.	game	349 .	grass	381.	on'ly	413.	price
318.	have	350 .	boil	382.	print	414.	spoon
319.	come	351.	came	38 3.	queer	415.	wrote
320.	back	352 .	door	384.	soon	416.	quite
321.	last	353. 3	less	385.	soft	417.	sense
322.	mile	354.	plant	386.	drew	418.	their
323.	note	3 55.	week	387.	noise	419.	wrong
324.	send	356. 3	lift	388.	month	42 0.	learn
325.	wind	357. :	mark	389.	u g 'ly	421 .	great
326.	a'ble	358.	dust	390.	whom	422 .	front
327.	force	35 9.	sole	391.	neck	42 3.	break
328.	wear	360 .	town	392 .	o'pen	424 .	short
329.	mice	361.	birth	393.	born	425.	train
330.	fail	362.	grave	394.	sore	42 6.	white
331.	ba'by	363.	\mathbf{draw}	395.	then	427 .	plain
332.	clerk	364.	e'vil	396.	dirt	428.	nurse
333.	dish	365.	farm	397.	earth	429.	\mathbf{sight}
334.	field	366.	hurt	398.	i'ron	430 .	fresh
335.	grain	367.	li'ar	399.	la'zy	431.	loose
336.	house	368.	right	400 .	soup	432.	\mathbf{might}
337.	juice	369 .	paint	401.	lamb	433.	\mathbf{drive}

434 . i	'dle	466.	voice	498.	nev'er	530.	o'cean
435. c	elear	467.	catch	499 .	ounce	531.	un'cle
436 . d	lraw	468.	bound	500 .	\mathbf{night}	532 .	tru'ly
437. b	east	4 69.	heard	501.	fence	533 .	wag'on
438. o	or'der	470.	place	502 .	build	534.	\mathbf{pink}
439. c	elose	471.	leave	503.	\mathbf{drink}	535.	of'fer
440. d	lirt'y	472 .	mouse	504.	brown	536 .	pow'er
441 . d	lrove	473 .	dream	505.	\mathbf{bridge}	537.	raise
442 . h	eart	474.	chain	506.	blind	538.	sheep
443 . c	ount	475.	blood	507.	wives	539.	through
444. g	guide	476.	pearl	508.	judge	540.	store
445. fe	\mathbf{ound}	477. 1	reach	509.	lit'tle	541.	wheat
446. fr	ruit	478.	sharp	510 .	board	542 .	bad'ly
447. q	uick (479 . 1	${f those}$	511.	for'ty	543.	change
448. re	\mathbf{ound}	480. •	\mathbf{wound}	512.	bet'ter	544.	steam
449. s	hirt	481.	young	513.	lives	545.	do'ing
450. the	hree		\mathbf{doubt}	514.	space	54 6.	ev'er y
451. w	vrite	483 . (clean	515.	taste		steel
452 . b		484. 1	_	516.	purse	548 .	of'ten
453. c		485. į	grease	517.	oxen	54 9.	please
454. d		486. j	*		a bout'		\mathbf{smile}
455. fi	\mathbf{ght}	487. :	yeast	519.	cot'ton	551.	qui'et
456. g		488. v			lov'er		rough
457. la	_			521.	met'al	553.	ta'ble
458. so	ome	490. c	quart	522.	worst	554 .	brass
459. tl				523 .	no'ble	555.	east
460. w	orse	492. 1		~ .	aft'er		fe'ver
461. tı				525 .	hap'py	557 .	hap'py
462 . d	-		6	526.	waste	558 .	light
463. si		4 95. l		527 .	blame		month
464. tl		4 96. 1			world		en joy'
465. p	oint	4 97. 1	friend	529.	peach	561.	mer'cy

562.	bread	594 .	damp	626.	spend	658.	praise
56 3.	stick	595.	be low'	627.	tough	659.	watched
564.	riv'er	596.	height	628.	an'gry	660.	val'ley
565.	skirt	597.	knife	629.	lat'er	661.	steal
566.	throw	598.	lin'en	630.	scrub	662 .	tongue
567.	least	599.	col'or	631.	track	663.	part'ly
568.	stand	600.	wa'ter	632.	\mathbf{ought}	664.	swear
569.	twice	601.	car'ry	633.	pound	665.	throat
570.	drink	602.	ear'ly	634.	black	666.	twelve
571.	go'ing	603.	weight	635.	still	667.	but'ton
572 .	hat'ed	604.	south	636.	fig'ure	668.	a cross'
57 3.	jew'el	605.	touch	637.	eight'y	669.	bit'ter
574.	lem'on	606.	an'gle	638.	dif'fer	670.	on'ion
575.	street	607.	be'ing	639.	suit	671.	nine'ty
576.	rough	608.	these	640.	re'al ly	672 .	mut'ton
577.	wom'an	609.	beans	641.	plen'ty	673.	sec'ond
578.	tooth	610.	warm	642.	oth'er	674.	thought
579.	wid'ow	611.	peace	643 .	sweep	675.	fel'low
580.	\mathbf{shake}	612.	re ply'	644.	tow'el	676.	gar'den
581.	thick	613.	cause	645 .	un'ion	677.	hav'ing
582 .	but'ter	614.	fif'ty	646.	mak'ing	678.	strong
583 .	\mathbf{bought}	615.	heav'y	647.	gai'ly	679.	thor'ough
584.	low'er	616.	ly'ing	648.	priest	680.	re peat'
585.	mon'ey	617.	stop	649 .	suit	681.	nee'dle
586.	cru'el	618.	to-day'	650.	though	682.	spoil
587.	a mong'	619.	dai'ly	651.	win'ter	683.	trav'el
588.	broom	620 .	a gree'	652.	\mathbf{prompt}	684 .	freeze
589.	straw	621.	lev'el	653.	since	685.	ground
590.	think	622.	mar'ry	654 .	ten'der	686.	hap'pen
591.	women	623.	up'per	655.	with in'	687.	in sane'
592.	dy'ing	624.	wa'ges	656.	yel'low	688.	com'mon
5 93.	loved	625 .	read'y	657.	or'ange	689.	de ceit'

CHANCELLOR - SHORT COURSE - 7

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. 690.	sweat	722.	law'yer	754 .	gal'lon	786.	cloud'y
691.	hol'low	723.	heav'en	755.	han'dle	787.	high'est
692.	knives	724 .	in'side'	756.	car'pet	788.	sleep
693.	mar'ket	72 5.	lon'ger	757.	dar'ing	789.	let'ter
694.	dish'es	726 .	sleeve	758.	share	790.	\mathbf{small}
695.	sweet	727.	rub'ber	759 .	mak'ing	791.	man'ner
696.	thir'ty	728.	tem'per	760.	\mathbf{smoke}	792 .	dif'fer
697.	wool'en	72 9.	mur'der	761.	mo'ment	793.	mat'ter
698.	rath'er	730 .	twen'ty	762 .	po lice'	794.	should
699.	un a'ble	731.	\mathbf{shame}	763 .	see'ing	795.	min'ute
7 00.	try'ing	732 .	num'ber	764.	mat'ter	796.	di rect'
701.	strike	733.	par'ent	765.	\mathbf{smooth}	797.	cor'ner
702.	\mathbf{thread}	734.	sound	766.	per'son	798.	spread
703.	wis'dom	735.	al'most	767.	a gain'	799.	dol'lar
704.	pur'ple	73 6.	choose	768.	ef'fort	800.	cir'cle
70 5.	of'fice	737.	di vide'	769.	shall	801.	cous'in
706.	mov'ing	738 .	cus'tom	770 .	or'phan	802.	stock
707.	school	739.	farm'er	771.	pas'tor	803.	o bey'
708.	wick'ed		square	772.	sheep	804.	fu'ture
709.	string	741.	de sire'	773.	gov'ern	805.	din'ner
710.	re main'	742 .	high'er	774.	low'est	806.	sol'id
	to'ward	743.	mas'ter	775.	mid'dle	807.	fam'i ly
712.	will'ing	744.	${\bf great'ness}$	776.	spring	808.	en'gine
713.	clothes	745 .	pow'der	777.	lov'ing	809.	seize
714.	sto'ry	746.	serve	778.	moth'er	810.	nar'row
715.	o blige'	747.	nick'el	779.	speak	811.	use'ful
716.	na'ture	748 .	ar rest'	780 .	sil'ver	812.	sev'en
	un like'	749 .	fin'ger	781.	peo'ple	813.	pe'ri od
718.	stairs	750 .	hun'gry	782 .	cat'tle	814.	tri'al
719.	rot'ten	751 .	storm	783 .	ef fect'	815.	gath'er
720 .	ham'mer				fa'ther	816.	piece
721.	in vite'	753.	se cure'	785 .	bod'y	817.	for'est

READING

818.	stead'y	850.	feel'ing	882.	trai'tor
819.	set'tle	851.	last'ing	883.	sad'ness
820 .	po lite'	852.	stud'y	884.	writ'ing
821.	sin 'g le	85 3.	larg'est	885.	out'side'
822 .	pock'et	854.	pres'ent	886.	weath'er
823.	se vere'	855.	sor'row	887.	re ceive'
824.	fro'zen	856.	work'ing	888.	serv'ant
825.	shine	857.	shov'el	889.	trou'ble
826.	noth'ing	858.	flow'er	890.	vil'lage
827.	six'ty	859.	kitch'en	891.	win'ning
828.	with out'	860.	earn'ing	892.	straight
829.	sew'ing	861.	sum'mer	893.	ques'tion
830.	bush'el	862.	wheth'er ·	894.	suc cess'
831.	doc'tor	863.	teach'er	895.	oat'meal'
832.	writ'ing	864.	per'fect	896.	morn'ing
833.	spir'it	865.	re ceipt'	897.	sev'en ty
834.	larg'est	866.	shad'ow	898.	hate'ful
835.	sis'ter	867.	walk'ing	899.	ma chine'
836.	a fraid'	868.	com'ing	900.	cook'ing
837.	keep'ing	869.	be hind'	901.	dis cov'er y
838.	long'est	870.	dif'fer ent	902.	good'ness
839.	sim'ple	871.	eve'ning	903.	in quir'y
840 .	read'ing	872 .	'ex plain'	904.	meas'ure
841.	se'cret	873.	help'ful	905.	suc ceed'
842.	wash'ing	874.	glass'es	906.	plas'ter
843.	leath'er		draw'ing	907.	quar'ter
844.	meet'ing	876.	be fore'	908.	part'ner
845.	de feat'	877.	mem'o ry	909.	sub'ject
846.	bun'dle	878.	ear'nest	910.	prom'ise
847.	dis like'	879.	hus'band	911.	mar'ry
	find'ing	880.	bod'ies	912.	gro'cer y
849.	al'ways	881.	sto'ries	913.	heav'ing

	how ev'er		pleas'ure		mar'riage
	gen'er al		min'is ter		preach'ing
	health'y	948.	bless'ing		a gainst'
	mis'take	949.	fair'ness	981.	crim'i nal
918.	fail'ure		dis trust'	982.	a gree'a ble
919.	a round'	951.	shoul'der	983.	chim'ney
920.	butch'er	952.	al read'y	984.	pic'ture
921.	chick'en	953.	in'dus try	985.	chil'dren
922.	den'tist	954.	kind'ness	986.	dan'ger
923 .	farm'ing	955.	de serve'	987.	dif'fi cult
924.	fool'ish	956 .	coun'try	988.	dis charge'
925.	hun'dred	957.	build'ing	989.	break'fast
926.	min'er al	958.	an'i mal	990.	news'pa per
927.	de ceive'	959.	freez'ing	991.	o be'di ence
928.	mil'lion	960.	paint'ing	992 .	yes'ter day
929.	doz'en	961.	gra'cious	993.	pe cu'liar
930.	pleas'ant	962.	pos'si bly	994.	veg'e ta ble
931.	skill'ful	963.	sev'er al	995.	un'der wear
932.	mul'ti ply	964.	fash'ion	996.	e lec tric' ity
933.	stock'ing	965.	me chan'ic	997.	com mit'tee
934.	pri'vate	966.	busi'ness	998.	foun da'tion
935.	si'lence	967.	cour'age	999.	par tic'u lar
93 6.	pain'ful	968.	prop'er ty '	1000.	re mem'ber
937.	fur'nace	969.	com plete'	1001.	some times'
938.	moun'tain	970.	judg'ment	1002.	for'eign er
939.	trav'el er	971.	daugh'ter	1003.	gen'tle ness
940.	po ta'to	972.	med'i cine	1004.	fol'low ing
941.	thank'ful	973.	ber'ries	1005.	be gin'ning
942.	sick'ness	974.	bath'ing	1006.	dif'fer ence
943.	rail'road'	975.	prob'a bly	1007.	knowl'edge
944.	thou'sand	976.	be lieve'	1008.	to-mor'row
945.	tri'an gle	977.	cap'i tal	1009.	won'der ful
	_				

COMMON ERRORS IN SPEAKING

When we listen carefully to those speaking to us, we frequently notice errors of speech. Indeed, if we watch carefully what we ourselves say, we may find some errors in our own use of language. These errors may be corrected, and the proper expressions may be put in their places, if only care is taken. The following are a few of the common errors that are to be avoided. The correct form is given in the left-hand column, while the incorrect form, which unfortunately is heard so often, is given in the right-hand column.

CORRECT

INCORRECT

He doesn't.

I am not going.

We are not going.

I saw him do it.

I did it myself.

He and I went home.

Whom did you see?

He don't.

I ain't going.

We ain't going

I seen him do it.

I done it myself.

Him and I went home.

Who did you see?

When I met him, he said I When I met him, he says I looked well.

Rewrite the following sentences, filling the blanks with suitable words:—

- 1. I —— the thief running down a side street.
- 2. —— do you see?
- 3. I waiting for any one.
- 4. He --- know what to do about it.
- 5. I the work myself.
- 6. and I came out of the meeting together.

- 7. We ————— looking for anything in particular.
- 8. He —— that he —— the soldiers marching down the street.
 - 9. With —— were you walking?
 - 10. and went to Albany yesterday.

THE SHIP OF STATE

Thou, too, sail on, O Ship of State! Sail on, O Union, strong and great! Humanity with all its fears. With all the hopes of future years. Is hanging breathless on thy fate! We know what Master laid thy keel. What Workmen wrought thy ribs of steel. Who made each mast, and sail, and rope, What anvils rang, what hammers beat, In what a forge and what a heat Were shaped the anchors of thy hope! Fear not each sudden sound and shock — 'Tis of the wave, and not the rock: 'Tis but the flapping of the sail, And not a rent made by the gale! In spite of rock and tempest roar. In spite of false lights on the shore, Sail on, nor fear to breast the sea! Our hearts, our hopes, are all with thee. Our hearts, our hopes, our prayers, our tears, Our faith triumphant o'er our fears, Are all with thee, — are all with thee!

- From "The Building of the Ship," by Henry Wadsworth Longfellow.

THE PRESENT CRISIS

When a deed is done for Freedom, through the broad earth's aching breast

Runs a thrill of joy prophetic, trembling on from east to west. And the slave, where'er he cowers, feels the soul within him climb

To the awful verge of manhood, as the energy sublime
Of a century bursts full-blossomed on the thorny stem of
Time.

For mankind are one in spirit, and an instinct bears along, Round the earth's electric circle, the swift flash of right or wrong;

Whether conscious or unconscious, yet Humanity's vast frame

Through its ocean-sundered fibers feels the gush of joy or shame;—

In the gain or loss of one race, all the rest have equal claim.

We see dimly in the Present what is small and what is great, Slow of faith how weak an arm may turn the iron helm of fate,

But the soul is still oracular; amid the markets' din,

List the ominous stern whisper from the Delphic cave within, —

"They enslave their children's children who make compromise with sin."

Then to side with Truth is noble when we share her wretched crust.

Ere her cause bring fame and profit, and 'tis prosperous to be just;

- Then it is the brave man chooses, while the coward stands aside,
- Doubting in his abject spirit, till his Lord is crucified,
- And the multitude make virtue of the faith they had denied.
- Count me o'er earth's chosen heroes, they were souls that stood alone,
- While the men they agonized for hurled the contumelious stone,
- Stood serene, and down the future saw the golden beam incline
- To the side of perfect justice, mastered by their faith divine,
- By one man's plain truth to manhood and to God's supreme design.
- 'Tis as easy to be heroes as to sit the idle slaves
- Of a legendary virtue carved upon our fathers' graves,
- Worshipers of light ancestral make the present light a crime;—
- Was the Mayflower launched by cowards, steered by men behind their time?
- Turn those tracks toward Past or Future, that made Plymouth Rock sublime?
- New occasions teach new duties; Time makes ancient good uncouth:
- They must upward still, and onward, who would keep abreast of Truth;
- Lo, before us gleam her camp-fires! we ourselves must Pilgrims be,
- Launch our *Mayflower*, and steer boldly through the desperate winter sea.
- Nor attempt the Future's portal with the Past's blood-rusted key.

 James Russell Lowell.

THE FLAG GOES BY

Hats off!

Along the street, there comes A blare of bugles, a ruffle of drums, A flash of color beneath the sky:

Hats off!

The flag is passing by! Blue and crimson and white it shines, Over the steel-tipped, ordered lines.

Hats off!

The colors before us fly;
But more than the flag is passing by.
Sea-fights and land-fights, grim and great,
Fought to make and to save the State;
Weary marches and sinking ships;
Cheers of victory on dying lips;
Days of plenty and years of peace;
March of a strong land's swift increase;
Equal justice, right and law,
Stately honor and reverend awe;
Sign of nation, great and strong,
To ward her people from foreign wrong;
Pride and glory and honor, — all
Live in the colors to stand or fall.

Hats off!

Along the street there comes A blare of bugles, a ruffle of drums; And loyal hearts are beating high:

Hats off!

The flag is passing by!

- Henry Holcomb Bennett.

AMERICA

My country! 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died!
Land of the Pilgrims' pride!
From every mountain side
Let freedom ring!

My native country, thee —
Land of the noble, free —
Thy name I love;
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills,
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet freedom's song:
Let mortal tongues awake;
Let all that breathe partake;
Let rocks their silence break,
The sound prolong.

Our fathers' God! to Thee,
Author of liberty,
To Thee we sing:
Long may our land be bright
With freedom's holy light;
Protect us by Thy might,
Great God, our King!

- Samuel Francis Smith.

WASHINGTON'S AMERICANISM

It is of infinite moment that you should properly estimate the immense value of your national Union to your collective and individual happiness; that you should cherish a cordial, habitual, and immovable attachment to it; watching for its preservation with jealous anxiety; discountenancing whatever may suggest even a suspicion that it can in any event be abandoned; and indignantly frowning upon the first dawning of every attempt to alienate any portion of our country from the rest, or to enfeeble the sacred ties that now link together the various parts.

For this, you have every inducement of sympathy and of interest. Citizens, either by birth or choice, of a common country, that country has a right to concentrate your affections. The name of American which belongs to you in your national capacity must always exalt the just pride of patriotism more than any appellation derived from local discriminations. With slight shades of difference, you have the same religion, manners, habits, and political principles. The independence and liberty you possess are the work of joint councils and joint efforts, of common dangers, sufferings, and successes.

This government, the offspring of your own choice, uninfluenced and unawed, adopted upon full investigation and mature deliberation, completely free in its principles, in the distribution of its powers, uniting security with energy, and containing within itself a provision for its own amendment, has a just claim to your confidence and your support. Respect for its authority, compliance with its laws, acquiescence in its measures, are duties enjoined by the fundamental maxims of true liberty.

- From the "Farewell Address of George Washington," 1796.

LINCOLN'S AMERICANISM

In the great journal of things happening under the sun, we, the American people, find ourselves in the peaceful possession of the fairest portion of the earth, as regards extent of territory, fertility of soil, and salubrity of climate. find ourselves under the government of a system of political institutions conducing more essentially to civil and religious liberty than any other of which history tells us. danger reaches us, it must spring up among us. It cannot come from abroad. As a nation of free men, we must live through all time, or die by suicide. Let every American, every lover of liberty, every well-wisher to prosperity, pledge his life, his property, and his sacred honor to the support of the Constitution and of the Laws. Let every man remember that to violate the Laws is to trample on the blood of liberty. Let reverence for the Laws be taught in schools and in colleges. Let it be preached from the pulpits, proclaimed in legislative halls, and enforced in courts of justice. Let it become the political religion of the nation.

Our fathers and forefathers were iron men who fought for principle. Among us, perhaps half our people are not descendants of the men of the Revolution: they have come from Europe themselves, or their ancestors, since 1776, to find themselves our equals. They cannot trace their connection by blood with those glorious men and make themselves feel that they are part of us. But when they look through that old Declaration of Independence, they find those old men saying, "We hold these truths to be self-evident, that all men are created equal," and they feel that the moral sentiment then taught evidences their relation to those men, that it is the source of all moral principle in them, and that

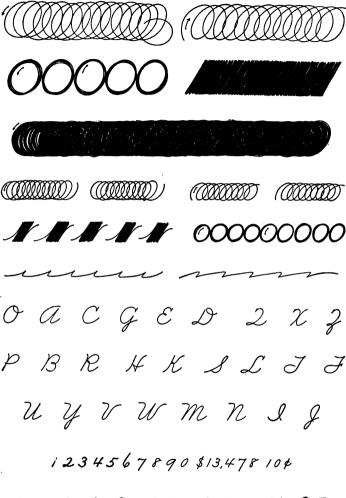
they have a right to claim it as though they were blood of the blood and flesh of the flesh of the men who wrote that Declaration; and so they are. That is the electric cord in the Declaration that links the hearts of patriotic and liberty-loving men together; that will link those patriotic hearts as long as the love of freedom exists in the minds of men throughout the world. That sentiment gave liberty to this country, and hope to all mankind for all future time. It promised that in due time the weight should be lifted from the shoulders of all men, and that all men should have an equal chance. So I say let the principle that all men are created equal be reached as nearly as possible, for it is the standard of the highest moral perfection. "Be ye therefore perfect, even as your Father in Heaven is perfect."

- From the "Speeches of Abraham Lincoln."

AMERICA

Foreseen in the vision of sages,
Foretold when martyrs bled,
She was born of the longing of ages,
By the truth of the noble dead,
By the faith of the living fed.
Fused in her candid light,
To one strong race, all races here unite.

- Bayard Taylor.



ABCDE I GHIJKL M NOP2 RS TUVWXY Z

mmmmm ellellellellelle mmmmm lllllllllllll mmmmm Ulllllllllll 0000000000 muminum iuweoac mnvxlb hhftdpgrsjgyz ache bad came man bed heal fleece men mine bid mice timid coke rope hod jog ruin tube pure quote dry lye my eye zeal we sure oxen wool your wave name The monument in memory of the hero was built of granite stone. abcdefghijklm nopgrsturwxyz

John	William	Mary	Charles
Alfred	Bertha	Louise	David
Emma	Frank	Grace	Samuel
Ida	Henry	Nancy	Thomas
Kate	Oliver	Patrick	Robert.
Zita	Viola	George	Catherine
Isabel	Nathan	Edward	Susan
What	is the best u	ray to writ	e the name

Alexander Howard Babbitt?

You may write it in full, as above; or as a. H. Babbitt, or as alexander H. Babbitt, or as a. Howard Babbitt.

Mr. Daniel G. Young lived at Quincy. Massachusetts, in the United States of America until 1843, when he moved to Xenia, Ohio. Later, he went to Chicago. Illinois.

In writing, legibility to the reader is more important than speed to the writer. Work, for the night is coming.

Zeal is the price of success.

Today we have; tomorrow we may never see.

All goodness begins in justice.

Friends multiply pleasures but divide sorrows.

Grace is the flower of all the virtues.

Vote for the candidate whom you can trust.

Better is contentment than great riches.

Let a man so live as not to be afraid to be alone with himself.

Regrets for the past may defeat hopes for the future.

Upon the Prosperity of the Home is built the Structure of National Greatness.

Better be alone than in bad company.

Make hay while the sun shines.

CHANCELLOR - SHORT COURSE - S

LESSONS IN LANGUAGE

STATEMENTS

The river is frozen.
 Winter has gone.
 A bird flies.
 T Capital . Period
 A Capital . Period

Of what does the first sentence tell something? What is told about it?

Of what does the second sentence tell something? What is told about it?

What does the third sentence tell?

With what kind of letter does the first statement at the top of the page begin? the second statement? the third? What punctuation mark is placed after these statements?

- 1. The first word of every sentence begins with a capital letter.
 - 2. A period is placed after every statement.

Write a sentence that tells something about the weather. Write a sentence telling what your occupation is.

Write a sentence telling where you live. Write a sentence telling what time it is.

A sentence that tells or states something is a statement. Learn to spell the following words, and make a statement about each:—

sun	fac'to ry	\mathbf{wheel}	riv'er
moon	school	pen'cil	skat'ing
may'or	work'ing man	world	dol'lar
friend	rail'road	book	fish'ing
	4.4		•

SIMPLE AND MODIFIED SUBJECTS

- 1. The robin sings.
- 2. The little red robin sings.

In these two sentences, what are spoken of?

In the second sentence, what two words show the kind of robin spoken of?

The name robin is called the simple subject of the sentence. The words little and red are called modifiers of the simple subject. The little red robin is the modified subject of the sentence.

Write the following sentences, filling the blanks with modifiers of the simple subjects:—

The — fox runs fast.
 The — boy will succeed.
 The — dog watched the stranger.
 The — leaves fall to the ground.
 The — moon has risen.
 A — squirrel is on the tree.
 Some — chestnuts were on the fire.
 The — beach was a nice place to bathe.
 The — Indians were on the march.
 A — gentleman will speak to you.
 The — flower smells sweet.
 Several — stars have disappeared.
 The — soldier has come home.
 The — street is stopped up with carts.
 The — man will lift the stone.

16. — weather has come.

FORMS OF SENTENCES

A sentence is the expression of a complete thought. A mere combination of words does not make a sentence. "The bright moon in the sky" is not a sentence, because the words do not express a complete thought; they do not make sense. These words merely mention the thing thought about. They make no statement or assertion about the thing; they do not tell what is thought about the thing.

But when we say, "The bright moon in the sky is beautiful," we do make a sentence. These words not only mention the thing thought about, but also tell what is thought about it. There are four forms of sentences:—

I. A sentence that states or declares something is a declarative sentence; as, —

Horses run.

The farmer is mowing.

II. A sentence that expresses a command is an imperative sentence; as,—

Stand up.

Take off your hat.

III. A sentence that asks a question is an interrogative sentence; as,—

Are you well to-day?
Who was Charles Sumner?

IV. A sentence that expresses sudden or strong feeling is an exclamatory sentence; as,—

What a fine picture this is! How fast the train goes!

Talk about these topics, and then —

- 1. Write a declarative sentence about New York city.
- 2. Write an interrogative sentence about England.
- 3. Write an imperative sentence addressed to a newsboy.
- 4. Write an exclamatory sentence about the weather.
- 5. Write a question, and also an answer to it.

PUNCTUATION

A declarative or an imperative sentence should be ended by a period (.).

An interrogative sentence should be ended by an interrogation point or question mark (?).

An exclamatory sentence should be ended by an exclamation point (!).

Using the rules above, arrange each of the following groups of words into the different kinds of sentences, with such additional words as may be required:—

- 1. is, of South America, warm, the climate.
- 2. on a long journey, away, to-morrow, am going, with my friend, I.
 - 3. his visit, did, Mr. Smith, about, say, what.
 - 4. the moon, what a, is, glorious sight.
 - 5. enemies, your, bless.

Make sentences each containing one or more of the following words:—

is	do	find	make	work
sea	get	there	be gin'	pa'per
boat	where ·	gar'den	tools	knife
help	pain	field	catch	o bey'

Explain the punctuation of each of your sentences.

FORMS OF SENTENCES

I. Write declarative sentences about: -

bread paper fruit table doctor work canal patient rather medicine

Write interrogative sentences about: —

shoes weather grocer farmer overalls razor effort factory button bread

Write imperative sentences addressed to: -

a grocer

a regiment

a bootblack

a butcher

a waiter

a post-office clerk

Write exclamatory sentences about: -

a snowstorm

a hot day

baseball

II. With what kind of a letter do all sentences begin?

What punctuation mark stands at the end of a declarative sentence? of an interrogative sentence? of an exclamatory sentence?

III. Learn to spell the following words, and then write each word in a good sentence:—

be tween' busi'ness sep'a rate re ceive' ca nal' be lieve' vin'e gar hon'es ty ba na'na ab'sence sin'gle bril'liant

IV. Study for dictation: —

"Little strokes fell great oaks. A little neglect may breed mischief; for want of a nail, the shoe was lost; for want of a shoe, the horse was lost; and for want of a horse, the rider was lost."

— Benjamin Franklin.

MAKING SENTENCES

He saw the sly monkey.

He saw the active monkey.

He saw the wild monkey.

He saw the sly, active, wild monkey.

Combine the sentences in each of the following groups into a single sentence:—

- The tall pine tree stood on the river's bank.
 The lonely pine tree stood on the river's bank.
 The old pine tree stood on the river's bank.
- He was lying on the cold ice.
 He was lying on the smooth ice.
 He was lying on the hard ice.
- There were many smooth pebbles on the beach.
 There were many round pebbles on the beach.
 There were many white pebbles on the beach.
- 4. The gay children are coming down the street.

 The noisy children are coming down the street.

 The frolicsome children are coming down the street.
- She had some fresh flowers.
 She had some bright flowers.
 She had some beautiful flowers.
- We saw sloops in the harbor.
 We saw schooners in the harbor.
 We saw yachts in the harbor.
- 7. The blacksmith was a strong man. The blacksmith was a large man. The blacksmith was a dark man.

EXERCISE IN MAKING SENTENCES

Write answers to the following questions. Make each answer a complete sentence:—

- 1. Where does the sun rise?
- 2. When do the leaves fall from the trees?
- 3. At what time of year do the ponds freeze over?
- 4. What makes the locomotive engine go?
- 5. What makes the clouds move in the sky?
- 6. At what time of the year are the fruits ripe?
- 7. When do the farmers plant their seed?
- 8. Who is now president of the United States?
- 9. What is the color of the sunset?
- 10. At what time of the year does hot weather come?
- 11. What game is played in summer?
- 12. What kinds of ships sail on the sea?
- 13. What carries the ships across the sea?
- 14. How can you tell in what direction the wind blows?
- 15. Who makes bread?
- 16. Who delivers letters?
- 17. Who shoes horses?
- 18. What does the glazier do?
- 19. How many hours are there in a day?
- 20. Who sells drugs?
- 21. What does the cobbler do?
- 22. Who makes tables?
- 23. What does the bootblack do?
- 24. Where do the horses drink?
- 25. When does Thanksgiving Day come?
- 26. How many senators are there from each State?
- 27. Do you like to go fishing?

SUBJECT AND PREDICATE

We have learned that when we use words to express a thought in completed form, we make a sentence. In expressing our thought, we name the thing thought about, and then we tell what we think about this thing.

In the sentence, "The dog runs," "dog" names the thing thought about, and "runs" tells what is thought about the dog.

The thing thought about is called the subject of the sentence; what is thought of the thing is called the predicate.

The boy skates.

In this sentence, "the boy" is the subject, and "skates" is the predicate.

In the following sentences, pick out the subject and the predicate:—

- 1. The carpenter is hammering.
- 2. The newsboy is shouting.
- 3. The cow is chewing her cud.
- 4. The horse is frightened.
- 5. The ocean is deep.
- 6. Morse invented the telegraph.

For dictation: -

"Whene'er a noble deed is wrought,
Whene'er is spoken a noble thought,
Our hearts in glad surprise
To higher levels rise." — J. G. Whittier.

Make sentences containing: -

glad	no'ble	spo'ken	sur prise'	hearts
when ev'er	high'er	lev'els	rise	thought

WORDS USED TO ASSERT

- 1. The wind blows.
- 3. The picture is beautiful.
- 2. The moon rises.
- 4. The lemon is sour.

What word tells what the wind does? What does the wind do? What word tells what the moon does? What does the moon do? Is the picture beautiful? What word do you use to say this of the picture? What does the word is do in the fourth sentence?

Words like blows, rises, and is, used to make assertions, are called verbs. We cannot make a statement without using a verb. We cannot say anything about a thing or a person unless we use a verb. Therefore, it is important to understand what verbs are.

Complete the following, filling the blanks with verbs:—

- 1. The monkey ----.
- 2. The tree ——.
- 3. Birds —— in the air.
- 4. The apples green. 5. The building —— tall.
- 6. Fishes —— in the water.
- 7. Charles —— the ball.
- 8. The horse —— the fence.
- 9. The snake on the ground.

- 10. Horses —— hay.
- 11. The year —— twelve months.
- 12. Bees honey.
- 13. John his kite.
- An acorn —— an oak.
- 15. The letter —— well written.
- 16. The clock —— seven.

Write in a sentence each of the following verbs: —

run	hear	fear	eat	write	read
walk	like	push	hur'ry	tear	wear
ride	drive	rise	buv	stand	fail

WORDS USED TO ASSERT

- 1. The horse ran away.
- 2. The birds come in the spring.

In the first sentence the verb, ran, tells the action of the horse. In the second sentence the verb, come, tells the action of the birds.

A verb asserts something of its subject. In the following sentences pick out the verb and tell what it asserts of its subject:—

- 1. The blacksmith is shoeing the horse.
- 2. Columbus discovered America.
- 3. The train travels fast.
- 4. The policeman arrested the thief.
- 5. The men were unloading the vessel.

Make twenty sentences by combining the following nouns and verbs:—

Nouns

1. baby, babies.	6. lion, lions.
2. woman, women.	7. star, stars.
3. boy, boys.	8. wind, winds.
4. dog, dogs.	9. horse, horses.
5. man, men.	10. bird, birds.

VERRS

1.	twinkle, twinkles.	6. blow, blows.
2.	run, runs.	7. swim, swims.
3.	fly, flies.	8. vote, votes.
4.	cry, cries.	9. roar, roars.
5 .	bark, barks.	10. sew, sews.

SENTENCE-MAKING

Make sentences, using three or more of these words; for example, —

The old bridge may soon break through.

The teamster drove fast across the bridge.

Nouns .	Adjectives	Adverbs	\boldsymbol{v}	erbs of Ac	ion ·
bridge	old	slow	fall	fell	fallen
coin	new	fast	break	broke	broken
mason	strong	soon	act	acted	acted
teamster	weak	late	supply	supplied	supplied
paper	fine	now	buy	\mathbf{bought}	\mathbf{bought}
tree	poor	nicely	sell	sold	sold
ice	nice	then	write	wrote	written
children	coarse	softly	drive	drove	driven
merchant	soft	roughly	work	\mathbf{worked}	worked
city	rough	well	build	\mathbf{built}	built
clerk	\mathbf{good}	badly	speak	spoke	spoken
foreman	bad		grow	grew	grown
goods	well	Prepositions	carry	carried	carried
watch	sick	in	lay	laid	laid
coat	young	on	lie	laid	lain
hen	\mathbf{ugly}	at	eat	ate	eaten
barn	beautiful	to	sleep	\mathbf{slept}	slept
house	clean	${f through}$	make	\mathbf{made}	\mathbf{made}
water	dirty	of	treat	treated	treated
sun	useful	across	run	ran	run .
flower	useless	below	burn	burned	burned
horse	glad	$\mathbf{a}\mathbf{bove}$	Duili	burnea (burnt
book	\mathbf{sad}	under	find	found	found
money	$\mathbf{healthy}$	by	wear	wore	worn

SUBJECT AND PREDICATE. — ANALYSIS

The subject of a sentence names that of which something is thought.

The predicate of a sentence tells what is thought about the subject.

The analysis of a sentence is the separation of it into its parts.

Separate each of the following sentences into subject and predicate:—

- 1. Charles Sumner was a great statesman.
- 2. Whitney invented the cotton gin.
- 3. The elephant has great strength.

Construct sentences by supplying a subject for each of the following predicates:—

1. —— sinks.	5. —— scratch.	9. —— frighten
2. —— jumps.	6. — run.	10. — strike.
3. —— shouts.	7. —— fight.	11. — kick.
4. —— climb.	8. —— write.	12. —— speak.

Construct sentences by supplying a predicate for each of the following subjects:—

1. G	old ——.	5.	Lightning ——.	9.	Spring —
2. C	locks ——.	6.	Fountains	10.	Fish ——.
3. R	ain ——.	7 .	Snow ——.	11.	Bees
4. T	rees ——.	8.	Time ——.	12.	Ships

Learn the meaning of the following words, and then write them in sentences:—

shad'ow		for'est	breeze	path'way
sun'shine		fern	sound	trav'el
moes	· ·	stream	growth	glad'ness

SIMPLE AND MODIFIED PREDICATES

- 1. The thrush sings.
- 2. The thrush sings merrily.

What is the subject of the first sentence? of the second? What word tells what the thrush does? What word tells how the thrush sings?

The word sing is called the simple predicate. The word merrily is called the modifier of the simple predicate.

Write the following sentences, filling the blanks with modifiers of the simple predicates:—

- 1. Snow falls ——.
- 2. He went to work ——.
- 3. The ship crosses the ocean ——.
- 4. They placed the sick man in the carriage ——.
- 5. The letter was written ----.
- 6. The employer spoke ——.
- 7. He held his own ——.
- 8. The river wound —— to the sea.
- 9. The breeze blew ——.
- 10. He fell —— to the ground.

Write five sentences, each containing a modified predicate.

Write five sentences, each containing a modified subject. Write each of the following modifiers in a sentence:—

ear'ly	soon	quick'ly	well	fine'ly
hon'est ly	best	whol'ly	fast	bad'ly

SUBJECT AND PREDICATE

A predicate may consist of two, three, four, or more words used together to complete the expression of a thought.

- 1. John could have been promoted.
- 2. William might have gone to New York.
- 3. New York is the largest city in America.

In the first sentence, the subject is "John," and the predicate is "could have been promoted."

In the second sentence, the subject is "William," and the predicate is "might have gone to New York."

In the third sentence, the subject is "New York," and the predicate is, "is the largest city in America."

Analyze the following sentences. Write each sentence with a straight line under each subject and a wavy line under each predicate, as, —

He | has been gone for a long time.

- 1. Charles has finished his lesson.
- 2. Mr. Johnson has become rich.
- 3. A storm has been raging.
- 4. Many books have been written.

Tell the subjects and the predicates in the following sentences and be prepared to write them from dictation:—

"Books are our most steadfast friends. They are our resource in loneliness. They go with us on our journeys. They await our return. They are our best company. They are a refuge in pain. They breathe peace upon our troubles. They await us as ministers of youth and cheer. They bring the whole world of things and men to our feet. They put us into the center of the world."—T. T. Munger.

THE PLURAL OF NOUNS

- 1. The mill is closed.
- 2. The mills are closed.
- 3. The wheel turns quickly.
- 4. The wheels turn quickly.

How many mills are spoken of in the first sentence? How many are spoken of in the second sentence? Does the subject of the third sentence stand for one, or for more than one, thing? For how many things does the subject of the fourth sentence stand?

How do the words mill and mills differ in meaning? How do they differ in spelling?

How do the words wheel and wheels differ in meaning? How do they differ in spelling?

The plural of most nouns is formed by adding s or es to the singular.

Write the following sentences, using the nouns in the plural instead of the singular number. Use is, has, and was, when speaking of one thing, and are, have, and were, when speaking of more than one thing.

- 1. The car was overloaded.
- 2. The class was dismissed at nine o'clock.
- 3. The light has gone out.
- 4. The street is blocked with teams.

Write sentences, using for subjects the plural forms of the following words:—

pa'per	${f shoe}$	soap	tow'el	wa'ter
brush'es	coin	nee'dle	col'lar	but'ton

VERBS — SINGULAR AND PLURAL FORMS

- 1. The fishes swim.
- 2. The fish swims.
- 3. The boys jump.
- 4. The boy jumps.

- 5. The girls sew.
- 6. The girl sews.
- 7. Fashions change.
- 8. Fashion changes.

What is the subject of the first sentence? What is the predicate? What is the subject of the second sentence? What is the predicate of the second sentence?

Is the subject of the first sentence singular or plural? Is the subject of the second sentence singular or plural? How does the verb in the second sentence differ from the verb in the first?

What is the verb in the third sentence? in the fourth? Which has a plural subject? Which has a singular subject? What is added to a verb when it has a singular subject?

What is the verb in the fifth sentence? Has it a singular or a plural form? Why? How has it been made?

The singular form of most verbs is made by adding s to the plural form.

Copy the following, filling the blanks with verbs: -

- 1. The bell ——.
- 2. The bells ——.
- 3. The river to the ocean.
- 4. The rivers —— to the ocean.
- 5. The cow ——.
- 6. The cows ----.
- 7. A dog ——.
- 8. Dogs ----.

Write in sentences both the singular and the plural forms of the following verbs:—

cut steal bakes send sells fin'ish find keeps col lect' trusts

REGULAR AND IRREGULAR VERBS

Tell how the past tenses of the following verbs are formed:—

Present	Past	PERF. PART.	Present	Past	PERF. PART.
live	lived	\mathbf{lived}	see	saw	seen
move	moved	\mathbf{moved}	give	gave	given
\mathbf{need}	needed	\mathbf{needed}	fall	fell	fallen

A verb that forms its past tenses by adding ed or d to the present is a regular verb; as,—

live lived lived

A verb that does not form its past tenses by adding ed or d to the present is an irregular verb; as,—

see saw seen

Point out the verbs in the following sentences, and tell which are regular and which irregular:—

- 1. The policemen rode on black horses.
- 2. Frank went to the city to select some horses.
- 3. Will you tell me why you did it?
- 4. They have lived in this country many years.

Learn the principal parts of the following verbs, and then write each in a sentence:—

PRESENT	Past	PERF. PART.	PRESENT	Past	PERF. PART.
go	went	\mathbf{gone}	draw	\mathbf{drew}	drawn
rise	rose	risen	\mathbf{swim}	swam	swum
lose	lost	lost	win	won	won .
seek	sought	\mathbf{sought}	wind	weund	wound
hold	held	held	sting	stung	stung

CONJUGATION OF THE VERB

INDICATIVE MODE

ACTIVE VOICE

PASSIVE VOICE

Present Tense

I help I am helped

Thou helpst (rare) Thou art helped (rare)

He helps He is helped
We help We are helped
You help You are helped
They help They are helped

Past Tense

I helped I was helped

Thou helpeds (rare)

He helped

We helped

You helped

You helped

You were helped

You were helped

They helped They were helped

Future Tense

I shall help I shall be helped

Thou wilt help (rare) Thou wilt be helped (rare)

He will help
We shall help
We shall be helped
You will help
They will help
They will be helped

Present Perfect Tense

I have been helped
Thou hast been helped (rare)
He has been helped
We have been helped
You have been helped
They have been helped

Past Perfect Tense

I had helped	I had been helped
Thou hadst helped (rare)	Thou hadst been helped (rare)
He had helped	He had been helped
We had helped	We had been helped
You had helped	You had been helped
They had helped	They had been helped

Future Perfect Tense

I shall have helped	I shall have been helped		
Thou wilt have helped	Thou wilt have been helped		
(rare)	(rare)		
He will have helped	He will have been helped		
We shall have helped	We shall have been helped		
You will have helped	You will have been helped		
They will have helped	They will have been helped.		

MODES OF THE VERB

Besides the Indicative Mode, there are several others, very difficult to learn in English.

The Indicative Mode makes statements and asks questions. for example, -

The man loves his wife and children. Was the sick man helped by his friends?

The Imperative Mode gives commands; for example, —
Wash and be clean.

The Potential Mode shows possibilities, powers, and duties; for example,—

He might have gone to a farm in South Dakota. He could have gone. He must go now.

The Subjunctive Mode tells of a condition or of something not true; for example, —

If she were strong enough, she could work in the factory.

If the boy should not prove honest, his employer would lose money.

The Infinitive Mode names an action or a state of being; for example, —

The good man loves to work for his family. To be brave, is seldom easy.

The Participles are verbal nouns; for example,—

Loving. Heard. Being completed. Having been done.

These modes are formed with the help of auxiliary (or helping) words, — shall, will, be, do, have, may, can, and must.

Some verbs are irregular in their conjugation. "Be" has many different forms; but "must" has only one form.

Besides these regular forms, there are other forms; for example, the Progressive, which says "I shall be going," instead of "I shall go," and the Emphatic, which says, "I did do it," instead of "I did it."

HAS AND HAVE

- 1. Mr. Williams has many horses.
- 2. Mr. Williams and Mr. Shaw have many horses.
- 3. I have finished my work.
- 4. John and I have finished our work.

About what is something said in the first sentence? in the second sentence? How many things are there in the subject of the first sentence? How many things are there in the subject of the second sentence, one thing or more than one thing? In which sentence is has used? In which is have used?

What is the subject of the third sentence? Is has or have used? How many are there in the subject of the fourth sentence? Is has or have used?

Has is used when speaking of one person or thing, and have is used when speaking of more than one person or thing, or of yourself.

Complete the following sentences, filling the blanks with has or have:—

- 1. I been sick for a long time.
- 2. He —— been promoted.
- 3. John and Charles —— lost their way.
- 4. The policeman —— caught the thief.
- 5. I received a letter.
- 6. The soldier gone to war.
- 7. The trees —— been rooted up by the wind.
- 8. —— they found the lost child?
- 9. Mr. Monroe, who is now twenty-one years of age, ——become a voter.

DICTATION

"So the Deacon inquired of the village folk
Where he could find the strongest oak,
That couldn't be split nor bent nor broke,—
That was for spokes and floor and sills;
The crossbars were ash, from the straightest trees;
The panels of whitewood, that cuts like cheese,
But lasts like iron for things like these."—O. W. Holmes.

Write in one column all the nouns in the selection above. In another column, write all the verbs.

Answer the following questions, making each answer a complete sentence:—

- 1. Of whom did the deacon inquire about wood for his carriage?
 - 2. What kind of an oak did he wish to find?
- 3. For what part of his carriage did the deacon use the wood of the oak?
 - 4. What kind of wood did he use for the crossbars?
 - 5. What kind of tree did he use for the crossbars?
 - 6. Of what wood did he make the panels?
 - 7. Is it easy to cut whitewood with a knife?
 - 8. Will whitewood last a long time?
- 9. Why did the deacon use whitewood to make the panels?
 - 10. Why did the deacon make the spokes of oak?
 - 11. What kind of wood would you use in making a bat?
 - 12. What kind of wood would you use to make a fish-pole?

The first word of every line of poetry begins with a capital letter.

WAS AND WERE

- 1. The man was in the carriage.
- 2. The men were in the carriage.
- 3. John was walking down the street.
- 4. John and James were walking down the street.

How many men are spoken of in the first sentence? Is something said about more than one horse in the second sentence? In which sentence is was used? In which sentence is were used?

How many boys are spoken of in the third sentence? How many boys are spoken of in the fourth? Why is was used in the third sentence, and were in the fourth?

When speaking of one, use was. When speaking of more than one, use were.

Copy the following, filling the blanks with was or were so as to make sentences:—

- They not at home.
 I at home.
- 3. The stars —— shining brightly.
- 4. The moon —— shining brightly.
- 5. The soldiers —— drilling.
- 6. The boys —— sailing the boat.
- 7. The soldier —— cleaning his musket.
- 8. He —— glad to see us.
- 9. We —— glad to see you.
- 10. The policeman ---- making an arrest.
- 11. The rivers —— frozen over.
- 12. The wind —— blowing a gale.
- 13. This —— once a land of negro slavery.

REGULAR AND IRREGULAR VERBS

How are the past tenses of the following verbs formed?

PRESENT	Past	PERF. PART.	PRESENT	PAST P	erf. Part.
vex	vexed	vexed	\mathbf{fight}	fought	fought
sharpen	sharpened	sharpened	see	saw	seen
like .	liked	liked	write	wrote	written

The verbs in the first column are regular; and those in the second column, irregular.

The principal parts of a verb are the present tense, past tense, and perfect participle. From these three parts, all the tenses of the verb may be found.

PRESENT	PAST	PERF. PART.	PRESENT	Past	PERF. PART.
arise	arose	arisen	begin	began	begun
bend	bent	bent	\mathbf{bind}	bound	\mathbf{bound}
break	broke	broken	forget	forgot	forgotten
give	gave	given	go	\mathbf{went}	gone
come	came	come	do	did	\mathbf{done}
\mathbf{drive}	drove	driven	lie	lay	lain
see	saw	seen	teach	taught	taught

In six different sentences, use each of the above irregular verbs in the six different tenses, — present, past, future, present perfect, past perfect, and future perfect.

For dictation: -

"Full knee-deep lies the winter snow,
And the winter winds are wearily sighing:—
Toll ye the church bell sad and slow,
And tread softly and speak low,
For the old year lies a-dying."—Alfred Tennyson.

ABBREVIATIONS

Some words are shortened or abbreviated when written: —

- 1. Doctor Smith lives at Number 78 Main Street.
- 2. Dr. Smith lives at No. 78 Main St.
- 3. A letter was directed to Mister Henry Shaw, Bloomfield, Essex County, New Jersey.
- 4. A letter was directed to Mr. H. Shaw, Bloomfield, Essex Co., N.J.
 - 5. Correct the three errors: So, Norwalk. Conn

What are the abbreviations in the second sentence? What is the abbreviation for "Doctor"? for "Number"? for "Street"?

What are the abbreviations in the fourth sentence? For what word is "Mr." an abbreviation? For what word is "Co." an abbreviation? For what is "N.J." an abbreviation?

Learn the following abbreviations: —

St.,	Street.	U.S.,	United States.
Ave.,	Avenue.	N.Y.,	New York (state).
Pl.,	Place.	P.O.,	Post Office.
N.,	North.	R.R.,	Railroad.
S.,	South.	Co.,	County, Company.
E.,	East.	No.,	Number.
W.,	West.	Mr.,	Mister.
s.w.,	Southwest.	Mrs.,	Mistress.
N.E.,	Northeast.	Rev.,	Reverend.
M.,	noon.	Hon.,	Honorable.
A.M.,	morning.	No.,	number.
P.M.,	afternoon.	Doz	dozen.

ABBREVIATIONS

A 3	A .1	α	General.	
Adm.	Admiral.	Gen.		
Com.	Commodore.	Col.	Colonel.	
Capt.	Captain.	Maj.	Major.	
M.D.	Doctor of Medicine.	D.D.	Doctor of Divinity.	
Lit.D.	Doctor of Letters.	G.A.R.	•	
LL.D.	Doctor of Laws.		Republic	
bbl.	barrel.	lb.	pound.	
hhd.	hogshead.	OZ.	ounce.	
cwt.	hundredweight.	qt.	quart.	
ft.	foot.	bu.	bushel.	
yd.	yard.	pk.	peck.	
C.O.D.	Collect on delivery.	F.O.B.	Free on board.	
i.e.	that is.	(i.e. buy	ver pays freight)	
e.g.	for example.	etc.	and so forth.	
do.	ditto, the same	Esq.	Esquire.	
A.D.	In the year of Our	B.C.	Before Christ.	
	Lord.	Sen.	Senator.	
M.C.	Member of Congress.	Gov.	Governor.	
Rep.	Representative.	Jr.	Junior.	
inst.	the present month.	Mdse.	merchandise.	
ult.	the last month.	Messrs.	Sirs, gentlemen.	
prox.	the next month.	Mme.	Madam.	
mo.	month.	N.B.	Note well.	
Mt.	Mount.	P.S.	Postscript, written	
Recd.	received.		after.	
Sec. or	Sec'y Secretary.	Supt.	Superintendent.	
Univ.	University.	S.S.	Sunday School.	
viz.	namely.	vs.	versus, against.	
Depart	ment may be abbrevia	ted to "d	lept." or "dep't".	
	nly the period (.) or the			

WORDS USED IN PLACE OF NAMES

- 1. I am going away with Charles.
- 2. Charles and I are going away.
- 3. We are going away.

In the first sentence, for what does the word I stand? In place of what name is it used? Which word in the second sentence is used in the place of the speaker?

In the third sentence, for what does the word we stand? When speaking for yourself alone, use *I*. When speaking for one or more persons and yourself, use we.

The words I and we are called pronouns.

Write the following sentences, filling the blanks with the word I or we:—

- 1. He said might do it.
- 2. go walking together very often.
- 3. —— cannot afford to spend the money.
- 4. John and will be there at half-past seven.
- 5. am not willing to do it.
- 6. are going into business together.
- 7. pretended that was very angry.
- 8. He said, "--- cannot agree with you."
- 9. —— have not bought our tickets.
- 10. Neither James nor ---- have seen him.
- 11. will soon be among my friends.

Learn to spell each of the following words, and then write them in sentences:—walking, business, tickets, among, going, friends, agree, spend, money, often.

PRONOUNS

- 1. I had a key, but lost it.
- 2. My mother thought she had seen it.
- 3. Tom said that he had seen it.
- 4. They were both mistaken.

In the first sentence, for what does the word it stand? Who did the mother think had seen it? Who did Tom say had seen it? In the second sentence, for what does the word she stand? In the third sentence, for what does the word he stand?

In the fourth sentence, for what does the word they stand? Words used instead of names are called pronouns.

Write the following sentences, filling the blanks with suitable pronouns:—

- 1. Mary will come if ---- can.
- 2. My father thinks that —— will go away to-morrow.
- 3. John and Frank have gone home, because —— want to read.
 - 4. I asked him and said would like it.
 - 5. Alice cannot sew, because —— has lost her needle.
 - 6. If my brother has no money, —— cannot go.
- 7. Mr. and Mrs. Smith will move into their new house, when —— return.

Learn to spell the following words, and then write each in a sentence: —

box	bell	house	fence	\mathbf{find}
horse	drive	story	board	strike
car	street	grass	nail	boat

PRONOUNS — Continued

Write the following sentences, putting the proper pronouns in the blank spaces:—

- 1. The man has brought ---- dinner.
- 2. When a man finds some money, —— should return it to the owner.
 - 3. The jury brought in verdict.
 - 4. The workmen were on the way to —— homes.
 - 5. William, I see that —— are not doing right.
 - 6. He knows what ---- wants.
 - 7. I will do anything to help —— that I can.
- 8. I will give all money, if you will give all time.
- 9. If I were in —— place, —— have everything —— wished.
 - 10. The gentleman had taken off --- hat.
 - 11. How can we get --- money back?
 - 12. Shall we give —— what they want?
 - 13. If she will give ---- money, I will give ----.
 - 14. When you see Tom, tell —— that —— will be there.
 - 15. Will Mr. Smith sell —— house?
 - 16. Have the men received —— pay?

QUESTIONS

When we wish to find out something, we ask a question about it. If we wish to know what time it is, we ask "What time is it?"

Write questions about the following: — the weather, horses, the country, the theater, to-morrow, school, this evening, money.

PRONOUNS — POSSESSIVE CASE

- 1. I am reading the book. It is my book. 2. We are reading the book. It is our book. 3. You are reading the book. It is your book. 4. He is reading the book. It is his book. 5. She is reading the book. It is her book. 6. They are reading the book. It is their book 7. It is a large book. Its pictures are beautiful. 8. They are large books. Their pictures are beautiful. In the first column of sentences, the pronouns are used as the subjects. In the second column, the possessive forms are used. The pronouns my, our, your, his, her, their, its, are possessive pronouns and are used to tell to whom a certain thing belongs. Write the following sentences, filling the blanks with suitable pronouns: -
 - 1. They have put on —— skates.
 - 2. Always keep —— things where —— belong.
 - 3. Henry has learned —— lesson.
 - 4. were walking in the woods and lost way.
 - 5. has torn dress.
 - 6. Hang your coat in place.
 - 7. We have finished work.
- 8. George has taken my umbrella, and broken handle.
 - 9. He has made up ---- mind to stay at home.

Write each of the following words in a sentence: —

rub'bers shoe but'ton neck'tie lace stock'ing trou'sers hand'ker chief string col'lar

THE POSSESSIVE FORMS OF NAMES

- 1. The boy has a new coat.
- 2. The boy's coat is new.
- 3. The boys have new coats.
- 4. The boys' coats are new.

Who has a new coat? Whose coat is new? What is added to the name boy to make it denote possession?

Who have new coats? Whose coats are new? What is added to the name boys to make it denote possession?

To make a singular name denote possession, add 's to it.

To make a plural name denote possession, add the apostrophe.

When the plural form does not end in s, add the apostrophe and s thus. — women's. men's.

Write the following sentences. Change the names denoting possession to the plural form, and make any other necessary changes:—

- 1. The boy's knife was new.
- 2. The boys' knives were new.
- 3. The bird's wing is broken.
- 4. The girl's dress is torn.
- 5. The ship's sail can now be seen.
- 6. The dog's ear is bleeding.
- 7. The robin's breast is red.
- 8. My sister's book is on the table.
- 9. My neighbor's house is very old.
- 10. My brother's dog is hungry.
- 11. I must answer my cousin's letter.
- 12. The man's boots are dirty.

WORDS USED WITH NAMES

- 1. John has a sharp knife.
- 2. William has a new hat.
- 3. The large house is on fire.
- 4. The horse is pulling a heavy load.

What word is used with the name knife? What does it tell? What word is used with the name hat? What does it tell? What word is used with the name house? What does it tell? What does the word heavy do?

What is the difference between "John has a knife" and "John has a sharp knife"?

Names are called nouns.

Words used to qualify nouns or to limit the meaning of nouns are called adjectives.

Write the following sentences, filling the blanks with suitable adjectives:—

- 1. weeks make a year.
 2. The clouds are passing over.
 3. The apples are on the ground.
 4. Here are a dozen oranges.
 5. The boy is not tall enough to get the fruit
 6. The man was convicted.
 7. weather has come again.
 8. The boy will succeed.
 9. We walked up the very mountain.
 10. The book has many pictures in it.
 11. Ice is water.
- 12. He was riding a very —— horse.

 CHANCELLOR—SHORT COURSE—10

WORDS USED WITH NAMES

Honest man. Kind father. Good dog. Fast horse. In each of these phrases an adjective is used to modify a noun. It tells something about the thing of which the noun is the name.

A phrase is a group of related words expressing a single idea.

The words honest, kind, good, and fast are adjectives. Each tells something about the noun it modifies. The word honest describes man; the word kind describes father; the word good describes dog; and the word fast describes horse.

Write nouns with the following adjectives: -

\mathbf{soft}	\mathbf{good}	this	large	shin'y
first	many /	clear	ten	A mer'i can
these	great	white	heav'y	in dus'tri ous
cold	love'ly	sharp	cru'el	pleas'ant
fine	a'ble	brave	slow	cost'ly

Write adjectives with the following nouns: -

book	gen'tle man	chair	hat	house
stove	boat	din'ner	train	wag'on
glass	mer'chant	\mathbf{ship}	wa'ter	mu'sic
eve'ning	car'pen ter	room	car'pet	pen
bank	oak	street	pa'per	let'ter

Name some things that may be approximately described by the following adjectives:—

sour	sweet	stick'y	wet	\mathbf{dry}
loose	\mathbf{hot}	tough	thin	hand'some
rough	\mathbf{smooth}	green	long	\mathbf{smart}

WORDS THAT TELL HOW, WHEN, WHERE

- 1. The fox runs fast.
- 2. The fox will get away soon.
- 3. The fox is there.

How does the fox run? When will the fox get away? Where is the fox?

Words which tell how, when, or where are called adverbs. Write the following, filling the blanks with adverbs:—

- 1. Every one should do his work ----.
- 2. The storm came very ——.
- 3. He gave the money —— to the poor.
- 4. The old gentleman spoke very —— to him.
- 5. You must be —— on time.
- 6. John came —, and missed the train.
- 7. The old man walked —— down the street.
- 8. The policeman will be here —.
- 9. The train stopped ——.
- 10. He —— does his duty.
- 11. He was vexed and spoke ——.
- 12. Charles did not come —, but he will be here —.

Learn to spell each of the following adverbs, and then write it in a sentence:—

quick'ly	late	soon
yes'ter day	to mor'row	ear'ly
fine'ly	glad'ly	quite
tru'ly	u'su al ly	po lite'ly
slow'ly	plain'ly	of'ten

PUNCTUATION

An abbreviation should be followed by a period; as, —

Mr. Chas. G. Shaw.

Hon. John E. Dickson.

New York, N.Y.

Missouri, Mo.

Advertisement, advt.

Merchandise, mdse.

Write and punctuate correctly:—

Dr Wm K Bliss Cleveland O

Notice the punctuation of the following sentences: -

1. "Who is losing? who is winning? are they far; or come they near?

Look abroad and tell us, sister, whither rolls the storm we hear."

— J. G. Whittier.

"Part thy blue lips, northern lake! Moss-grown rocks, your silence break!"

- J. G. Whittier.

3. Dr. J. C. Goldsmith will give an illustrated lecture in Lyceum Hall, Manchester, N.H.

Supply the period, the interrogation point, and the exclamation point in the following sentences:—

"Who is this youth Surely he has never gone down into the depths I know all the aspects of those who have passed through the dark valley By what right is he among us"

— Nathaniel Hawthorne.

Learn to spell: -

reg'is ter	si'lence	a broad'	ab bre'vi a'tion
oc'cu pa'tion	lec'ture	north'ern	buck'et
through	sup ply'	fol'low ing	pros per'i ty

PUNCTUATION

I. The name of a person or thing addressed should be marked off from the rest of the sentence by a comma (,); as, —

Your work is improving, John.

- II. Several words, phrases, or clauses of the same kind, following each other, should be separated by commas; as,—
 - Mr. Andrews is an industrious, honest, temperate man.
- III. A word or a phrase in apposition, that is, a word or a phrase explaining the word it follows, is separated from the rest of the sentence by commas; as,—

Daniel Webster, the great orator, was born in New Hampshire.

IV. A direct quotation, that is, the exact words of a writer or a speaker, should be separated from the preceding part of the sentence by a comma; as,—

Agassiz said, "I have no time to waste in making money."

V. The members of a compound sentence should be separated by a comma; as, —

He shouted, but received no answer.

Supply periods and commas in the following: -

- 1. The old oaken bucket the iron-bound bucket

 The moss-covered bucket which hangs in the well
- 2. Make up your mind to do a thing and you will surely do it
 - 3. It hurts a man's pride to say "I do not know"
 - 4. He who teaches often learns himself

LETTERS

Copy the following letter to a friend. Notice that it differs in form from a business letter.

DENVER, Colo. Mar. 2, 1911.

MY DEAR TOM: -

I am very glad indeed to receive your letter of November 24. It gives me great pleasure to hear that you are recovering from your long illness.

You ask me what I am doing. I have just taken a position in the milk business. I drive the team for the delivery of milk in the morning. Sometimes, it is pretty hard getting up so early on the cold winter mornings. But you have heard the old proverb, "Early to bed and early to rise, makes a man healthy, wealthy, and wise."

Kindly remember me to your father and mother. Hoping to hear from you very soon, I remain,

Yours very truly,

WILLIAM B. MITCHELL.

Write a letter to a friend containing a description of your daily work. See that the place of writing, the date, the greeting, and the conclusion are in their proper places.

Write a letter to your cousin, Mr. Charles H. Smith, asking him to take dinner with you next Thursday evening.

Write a letter of congratulation to your brother on his birthday.

Write a letter to the Associated Charities, Boston, Mass., asking aid for an old lady who needs help.

Write an account of some battle of which you have read.
Write a note advising a friend to read a book that you know and like.

DESCRIPTION AND EXPOSITION

- 1. Tell how a tree is felled.
- 2. Compare a grasshopper and a bumblebee.
- 3. Describe a game of tennis.
- 4. Tell all you know about a bicycle, how it is made and operated, and to what accidents it is liable.
 - 5. Tell how bread is made.
 - 6. Describe an electric car.
 - 7. Describe an elevator.
 - 8. Tell a beginner how to row a boat.
 - 9. Tell how a drawbridge works.
 - 10. Tell what the duties of a locomotive engineer are.
 - 11. Tell how potatoes are raised.
 - 12. Explain how you would build a fire in a stove.
 - 13. Tell how you would harness a horse.
 - 14. Tell how to mend a tin can that has a hole in it.
 - 15. Describe the building of a road.
 - 16. Tell what the duties of a policeman are.
 - 17. Tell how letters reach their destination.
 - 18. Tell how a board fence is built.
 - 19. Tell what the duties of a fireman are.
 - 20. Tell how you would sew a button on a coat.
 - 21. Tell how the telephone helps us.
 - 22. Describe a canoe.
 - 23. Tell how a chimney is built.
 - 24. Tell how bricks are made.
 - 25. Tell how you would cook a piece of beef.
 - 26. Tell how you would make a camp in the woods.
 - 27. Tell of a visit to a large manufactory.
 - 28. Tell of your favorite sport.
 - 29. Tell what you read in the newspaper.

DESCRIPTION

A description of a thing gives its appearance and its qualities. A description is a picture made by means of language. What picture do you get from the following description?

"Fifteen-year-old Jo was very tall, thin, and brown, and reminded one of a colt; for she never seemed to know what to do with her long limbs, which were very much in her way. She had a decided mouth, a comical nose, and sharp gray eyes, which appeared to see everything, and were by turns fierce, funny, or thoughtful. Her long, thick hair was her one beauty; but it was usually bundled into a net to be out of her way. Round shoulders had Jo, big hands and feet, a fly-away look to her clothes, and the uncomfortable appearance of a girl who was rapidly shooting up into a woman and didn't like it."

- From "Little Women," by Louisa M. Alcott.

Have you now a good idea of what kind of girl Jo was? What points does Miss Alcott mention in giving a description of Jo? When we write a description, we must first carefully select the features about which we will write.

- 1. Make a list of the points you would write about in describing the outside of the house in which you live; the view from your room window; a trolley car; a city square.
- 2. Bring to the class descriptions found in your reading of a person; a place; an object.
 - 3. Write descriptions of different members of your family.
 - 4. Describe a scene in a factory.
 - 5. Describe a crowded city street.
 - 6. Describe a quiet scene in the country.

LETTER WRITING

There are business, social, and personal letters. Each of these three kinds of letters should be written in a special form. The differences between these forms may be seen in the following illustrations:—

A BUSINESS LETTER

125 Main Street, Chelsea, Mass., June 25, 1904.

Miss Alice Williams, Trenton, N.J.

DEAR MADAM: --

Your order is received. We will ship the articles you desire as soon as possible.

Very respectfully yours,

Johnson & Johnson.

A NOTE OF INVITATION

Mr. Henry Mitchell requests the pleasure of Mr. Frank Weaver's company at dinner on Friday, June twenty-seventh, at six o'clock.

A PERSONAL LETTER

May 1, 1904,

205 Broad Street, Newark, N.J.

MY DEAR ALFRED: -

I am very sorry that I was unable to keep my engagement with you last night, but hope to have better luck next time. Let me know when you are coming to town again.

Yours very truly.

JOHN LONG.

Mr. Alfred K. Warwick, 224 East 3d St., Chicago, Ill.

LETTERS

Every letter has four parts:—the heading, the salutation, the body, and the conclusion.

- I. The heading tells when and where the letter is written.
- II. The salutation consists of the opening words of greeting.
- III. The body of the letter contains what you wish to say to the person to whom the letter is written.
- IV. The conclusion consists of the closing words of respect or affection, and the name of the writer.
- 1. Write a letter to John Wanamaker, Broadway, New York, applying for a position either as clerk, bookkeeper, cash girl, or errand boy.
- 2. Imagine that you are away from home. Write a telegram consisting of not more than ten words to your father or to some friend, saying that you will return to-morrow.
- 3. Suppose that you have lost your pocketbook. Write to some newspaper an advertisement of your loss and the promise of a reward to the person who returns it and prepare a letter to forward with the advertisement, remitting the money to pay for it.
- 4. Write out the names and addresses of two business houses as you would write them for the superscription of envelopes. Do the same with the names and addresses of two of your friends.
- 5. Write a letter to your mother, telling her what you have done in school to-day.
- 6. Write a letter to your teacher, describing carefully some bird you have seen or read about. Write so that your teacher will recognize the bird you have described.

LETTER AND POSTAL CARD

1273 NINTH AVE., MANHATTAN, NEW YORK, N.Y., March 26, 1911.

Mr. Arthur Snyder, 783 Arbor Court, Manhattan, New York, N.Y.

DEAR SIR: -

In the Daily Leader of yesterday, I saw your advertisement for man and wife to work at your country home.

I am a German, have been in this country four months, and understand the care of horses, cows, poultry, and lawns. I have a wife and one child six years old. My wife is a good cook. If this reply interests you, please ask me to come to see you at a time convenient to yourself.

Yours respectfully,

JACOB SCHMELZ.

Mr. Arthur Snyder,

Address on envelope:— 783 Arbor Court,

Manhattan,

New York, N.Y.

June 1, 1911., CHICAGO, ILL.

DEAR MICHAEL: -

I arrived here yesterday on my way to Seattle. I am hoping to find employment there as a motorman or teamster or perhaps as a lumberman. I have enough money to last me for a month or so while looking for work. If I find things pleasant, I will send for you to join me. It is a long journey, as long as crossing the ocean.

Yours sincerely,

JOHN McCarthy.

LETTERS

- 1. You have read a certain book, but do not remember the name of it. The author's name, however, you do remember. Write a letter to the Book Department of Marshall Field & Co., Chicago, Ill., asking them to tell you what the title of the book is. Of course, you must give in your letter such a description of the book that they will know what it is.
- 2. Write a brief item for a local paper, announcing a lecture to be given for the benefit of the school library fund. Tell who the lecture is and what the title of his lecture is. State the date and the place. Invite every one to come.
- 3. Write a letter to a friend of yours in South America. Suppose that he has never seen any snow. Tell him about it, how cold it has to be before there will be a snowstorm, the appearance after the storm, the pleasures that are to be enjoyed from it, such as coasting and tobogganing, and any things that you think might interest him.
- 4. Write a formal letter, inviting your friends to spend the evening at your home for the purpose of meeting your sister who is visiting you.
- 5. Write a letter to Gimbel Brothers, Philadelphia, Pa., applying for a position as clerk in their department store. Tell what positions you have occupied and what qualifications you possess that fit you for the work. Give references to persons who know your character and record.
- 6. Write a letter to the Board of Education, New York city, N.Y., applying for a position as janitor's helper.
- 7. Write a letter, inclosing \$4, to Harper & Bros., Franklin Square, New York city, for a subscription for one year to Harper's Monthly Magazine.

LETTER WRITING

Write the following letters, notes, and telegrams: -

- 1. A note to a newspaper, ordering your address changed from one place to another.
 - 2. A formal invitation to dinner.
 - 3. A note of regret in answer to an invitation to dinner.
 - 4. A letter of introduction for a friend.
 - 5. A letter inviting a friend to visit your home.
- 6. A letter of apology to a friend, explaining your inability to keep an engagement that you have made with him.
 - 7. A letter asking for the payment of a debt.
 - 8. A letter ordering some furniture.
- 9. A letter to the mayor or some other public officer of your city, complaining of some public nuisance.
- 10. A letter to the president of an electric railway, asking for damages for personal injury.
- 11. A letter to the postmaster, asking him to forward your mail to a new address.
 - 12. A letter to your teacher, asking for a recommendation.
 - 13. An informal note, asking a friend to tea.
- 14. A letter to a paper containing an advertisement for a lost watch. Offer a reward.
 - 15. A letter from home to an absent brother or sister.

For dictation: -

"It has been estimated that the quantity of heat discharged over the Atlantic from the waters of the Gulf Stream, on a winter's day, would be sufficient to raise the column of the atmosphere that rests upon France and the British Isles from the freezing point to summer heat." — M. F. Maury.

CAPITAL LETTERS

I. The first word of a sentence should begin with a capital letter; as,—

The weather is cold.

- II. A line of poetry should begin with a capital letter; as,—
 - "Speak clearly, if you speak at all;
 Carve every word before you let it fall."

-O. W. Holmes.

- III. Proper names should begin with capital letters; as, —
 George Washington, Fort Henry, Adirondacks.
- IV. Names of the Deity should begin with capitals, —
 God, Jehovah, Christ.
- V. Most abbreviations should begin with capital letters; as,—

 I have invited Mr. Phillips and Dr. Smith.
- VI. The words I and O should be written in capitals;as, —George feared that I would not dare to do it.

Copy the following sentences and show how the rules are applied: —

- 1. Mr. Mitchell will sail for England on Monday.
- 2. I will tell Mrs. Potter to go to New York.

Copy the following, putting capitals where necessary: —

charles	street	london	america
desk	orchard	pen	england
chicago	delaware	stove	book

CAPITAL LETTERS

- 1. Adjectives derived from proper names should begin with capital letters; as, Spanish.
- 2. Titles, when applied to an individual or used as a part of a name, should begin with capital letters; as,—

The President of the United States.

- 3. The names of the months and of the days of the week should begin with capital letters; as,—Sunday.
- 4. The first word in a direct quotation should begin with a capital letter; as, —

John replied, "Honesty counts."

- I. Write sentences containing these common nouns:—

 commander security dignity loyalty decision
 president patriot poverty relief approval
- II. Write sentences containing these proper nouns:—Spain Cuba Porto Rico Russia India Germany France
- ' III. Write sentences containing the following: —

Sun'day	Mon'day	Tues' day	Wednes'day
Thurs'day	Fri'day	Sat'ur day	Jan'u a ry
Feb'ru a ry	Sep tem'ber	Oc to'ber	Au'gust
A'pril	No vem'ber	De cem'ber	Thurs'day

Correct the following sentences: -

- 1. next monday the anderson auction co will sell the stock of smith brothers of new york city at a public sale.
- 2. gen. grant said, "i will fight it out on these lines if it takes all summer."
 - 3. the united states bought the philippines from spain.

COMPOSITION OUTLINES

- I. A Savings Bank. What is a savings bank? How is an account opened? How is money deposited? How is interest drawn? Is it a good practice to deposit money in a savings bank?
 - II. The People in our Street.

First paragraph, — describe the street.

Second paragraph, — the personal appearance of some dweller in the street.

Third paragraph, — the character of another resident.

Fourth paragraph, — a familiar occasion in the street, — such as children gathering and dancing to the music of a hand organ.

Fifth paragraph, — describe a conversation between neighbors.

Sixth paragraph, — the mode of life in the street as a whole.

- III. How to Build a Fire.
- a. The preparation of the place.
- b. The collection of the materials.
- c. The arrangements of the materials.
- d. Keeping the fire.
- IV. An Order to a Carpenter. Write a letter to a carpenter, giving details for the construction of a small bookcase,—the materials to be used, the size of the case, the ornamentation and finishing of it.
- V. A Description. Describe a stranger you met on the street to-day. It is easier to describe a person if you and the person are moving toward each other. Remember that you begin the description at a distance. Details should be mentioned only as they actually come into view.

NARRATION

A narrative tells a story. To be able to tell a story well, is a great accomplishment. To put all the details and particulars in their proper places, so that they will have the best effect and make the story most interesting, requires great skill.

A narrative should be divided into paragraphs. Just as each paragraph must be a unit and deal with one topic, so must a narration be a unit and deal with one general theme. Everything in the narration should center about one very important fact. Of course, other less important facts must be put in to introduce, describe, and explain the subject of the story.

- 1. Tell how two girls go out into the forest. They have an old, but brave, dog with them. They meet a panther. After a long struggle, the dog is overcome, and the girls stand at the mercy of the wild animal. Suddenly a shot is heard, and the panther falls dead. The rescuer then presents himself.
- 2. Write a story telling of a quarrel between two friends and of their reconciliation.
 - 3. Write a story suggested by a miser and his sorrows.
- 4. Write the story of how such a man as Abraham Lincoln rose from poverty in the backwoods to the presidency of the United States, through a constant struggle for self-improvement. (Study, hard work, law, politics.)
 - 5. Regarding some favorite book:
 - (a) Tell its name.
 - (b) Tell what you know of its author.
 - (c) Briefly outline the story of the book.
 - (d) Give your opinions and impressions of it.

NARRATION

- 1. Write an account of some bird that nests in your locality. Tell whether the bird is there all the year or not. Tell the time of nesting and what sort of a nest the bird makes. Describe the young birds, and mention any other facts you happen to know.
- 2. Write a story suggested by the words, "They all tumbled into the water."
- 3. Imagine a group of members of the Salvation Army on the corner of a crowded street. Tell what they do, how the crowd gathers round them, what is said, how the people are affected, how at last they march off down the street.
- 4. Some boys go in swimming from a wharf. A policeman stands on the wharf near their clothes, waiting for them to come out. Write the story suggested by these facts.
- 5. Tell the story of the auction of a house. Tell why the house was sold, who the auctioneer was, what kind of people were there, who the highest bidder was.
- 6. Write a brief account of an exciting event on the school grounds or on the street, using fictitious names. Then tell what led up to it and what followed it. Look over what you have written, and arrange it according to the order in which the various events took place.
- 7. A girl's mother went away on a visit, and she kept house for her father and little brothers and sisters. Imagine some funny happenings in the course of such an experience; and what the mother said upon her return home.
- 8. Two boys went to the river to catch some fish. They had neither hooks nor lines. Tell what happened to them.

EXPOSITION

By exposition, we mean explanation, making plain. To write an exposition of the steam engine is to explain the steam engine; that is, to tell how it is constructed, the principle on which it works, and the way it is operated. In short, we must make everything about the engine perfectly plain, so that any one who may read our exposition of it will understand it thoroughly.

- 1. Explain what is meant by the statement, "Evil to him who evil thinks."
 - 2. Explain how the game of baseball is played.
 - 3. Explain the method of voting at the polls.
- 4. Explain to a foreigner what is meant by the term, "North American Indian."
- 5. Explain to an Englishman what the Democratic (or Republican) Party is.
- 6. Suppose a friend of yours who has never been to a football game should ask you to tell him what a "touchdown" is. Explain it to him.
 - 7. Tell what is meant by each of the following sentences: —

To be prepared for war, is one of the effectual means of preserving peace.

People who live in glass houses should not throw stones.

Blessings are upon the head of the just; but righteousness delivereth from death.

8. If you have a camera, explain how a picture is made, so that a person who has never taken a picture may understand the general process. Write out your explanation. Next, suppose that a friend of yours has just bought a camera exactly like your own. Carefully explain it to him.

ARITHMETIC

NUMERATION AND NOTATION

- 1. one
- 2. two
- 3. three
- 4. four
- 5. five
- 6. six
- 7. seven
- 8. eight
- 9. nine
- 10. ten
- 11. eleven
- 12. twelve
- 13. thirteen
- 14. fourteen
- 15. fifteen
- 16. sixteen
- 17. seventeen
- 18. eighteen
- 19. nineteen
- 20. twenty
- 30. thirty
- 40. forty
- 50. fifty
- 60. sixty
- 70. seventy
- 80. eighty
- 90. ninety
- 100. one hundred

To express more than nine, we use tens combined with numbers less than ten. After ten, we say eleven, which is ten and one; twelve, or ten and two; etc., to nineteen. Twenty means two tens; twenty-one is two tens and one. After twenty-nine comes thirty, or three tens.

Ten, twenty, thirty, forty to ninety are called the tens' numbers. One, two, three to nine are called the units' numbers.

- 1. Write neatly in figures the numbers from one to one hundred.
- 2. Write in words: 28, 14, 16, 37, 56, 91, 45, 48, 82, 93, 75, 60, 109.
- 3. Write in figures: fifteen, seventy-eight, sixty-one, nineteen, thirty.

$$I = 1 \quad V = 5 \quad L = 50 \quad D = 500$$

IV = 4 X = 10 C = 100 M = 1000

- 4. Write in Roman numerals: 3, 6, 8, 14, 27, 48, 55, 101, 576, 1903.
- 5. Write in words: CCV, IX, XLI, MMX, MDCCCXL, XXIV, XXXVIII, LXXIII,

ADDITION

•	_1	_1	_
Δ	~	~	•

	uu.												
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
8	7	9	8	7	4	9	4	7	3	7	4	8	2
4	6	4	9	6	9	· 3	7	5	7	9	2	4	9
3	3	1	4	3	4	4	8	9	6	2	5	9	7
7	5	6	7	9	3	1	3	4	5	3	6	5	2
					_								

Addition of Numbers of More than One Figure

Rules.—1. Arrange the numbers to be added so that units shall stand under units, tens under tens, hundreds under hundreds, etc.

2. Add the units' column, and if the sum is less than ten, write it underneath. If it is equal to or greater than ten, place the right-hand digit of the sum underneath and add the left-hand digit to the numbers in the tens' column. Continue this process until all the columns have been added.

bb A	•
MULL	٠

. 24 . 8 973
073
, 510
298
431
31.
1296
9270
<u>5749</u>
37 .
79416
99999
42834
48296

SUBTRACTION

By subtraction, we find the difference between two numbers. The minuend is the number from which another number is subtracted. The subtrahend is the number to be subtracted from the minuend.

- RULES. 1. Place the subtrahend under the minuend so that units shall stand under units, tens under tens, etc.
- 2. Begin at the right-hand column and subtract each term of the subtrahend from the one above it.
- 3. When any term of the minuend is less than the term to be subtracted, add 10 to it, remembering that the next term of the minuend must be made smaller by 1.
- 2. Subtract 21 from 98.

 2. Subtract 169 from 311.

 98 311 PROOF. Add the remainder to the subtrahend.

 21 169 When the sum is equal to the minuend, the work is correct.

Subtract:

3.	4.	5.	6.	7.	8.	9.	10	11.
89	69	71	54	621	934	200	756	644
<u>25</u>	<u>34</u>	<u>28</u>	$\frac{25}{2}$	<u>443</u>	<u>621</u>	<u>167</u>	729	<u>598</u>
12.	1:	3.	14.	15.	16.		17.	18.
1428	92	67	88943	2247	8853	4	6896	3158
956	<u>46</u>	<u>21</u>	2767	<u>1691</u>	2921	.4	3427	1425
19.	2	0.	21.	22.	23.		24.	25.
82678	42	238	9367	1111	679	4	46721	98743
74225	19	924	205	999	398	7	34216	25555

MULTIPLICATION

The number which is multiplied is called the multiplicand. The number by which we multiply is called the multiplier. The result obtained is called the product.

Rules.—1. Place the multiplier under the multiplicand. If the multiplier consists of only one term, multiply each term of the multiplicand by it, beginning at the right and carrying as in addition.

1. Multiply 256 by 4.

256 $6 \times 4 = 24$. Write down the right-hand figure 4 and carry the 2. $5 \times 4 = 20$; 20 + 2 = 22. Write down the 2 and carry the 2. $2 \times 4 = 8$; 8 + 2 = 10. Write down the 10.

2.	3.	4.	5.	6.	7.	8.	9.
734	423	924	634	291	845	267	954
_7	8	2	_5	6	8	4	7

10. Multiply 684 by 21.

2. If the multiplier contains more than one term, multiply separately by each term, as above, placing the right hand figure of each partial product in the same column as the term by which you are multiplying. Add the partial products. The sum will be the entire product.

11.	12.	13.	14.	15.	16.	17.	18.	19.	20 .
756	954	846	953	734	432	658	498	671	738
<u>43</u>	_29	_57	69	<u>47</u>	<u>82</u>	73	_18	_58	_43
21.	22.	23.	24.	25	. 2	16 .	27 .	28.	29.
876	2895	4724	8954	6529	9 79	957	9579	4328	9937
28	23	62	_ 58	_73	3_	84	36	47	92

MULTIPLICATION TABLES

TWOS	THREES	FOURS	FIVES		
$1 \times 2 = 2$	1 × 3 = 3	$1 \times 4 = 4$	$1 \times 5 = 5$		
$2 \times 2 = 4$	$2\times 3=6$	$2\times 4=8$	$2\times 5=10$		
$3 \times 2 = 6$	$3 \times 3 = 9$	$3 \times 4 = 12$	$3 \times 5 = 15$		
$4 \times 2 = 8$	4 × 3 = 12	$4\times 4=16$	$4 \times 5 = 20$		
$5 \times 2 = 10$	$5 \times 3 = 15$	$5\times 4=20$	$5 \times 5 = 25$		
$6 \times 2 = 12$	$6 \times 3 = 18$	$6 \times 4 = 24$	$6 \times 5 = 30$		
$7 \times 2 = 14$	$7 \times 3 = 21$	$7 \times 4 = 28$	$7 \times 5 = 35$		
$8 \times 2 = 16$	$8 \times 3 = 24$	$8 \times 4 = 32$	$8 \times 5 = 40$		
$9 \times 2 = 18$	$9 \times 3 = 27$	$9 \times 4 = 36$	$9 \times 5 = 45$		
$10 \times 2 = 20$	$10 \times 3 = 30$	$10 \times 4 = 40$	$10 \times 5 = 50$		
$11 \times 2 = 22$	$11 \times 3 = 33$	11 × 4 = 44	$11 \times 5 = 55$		
$12 \times 2 = 24$	$12 \times 3 = 36$	$12 \times 4 = 48$	$12 \times 5 = 60$		

SIXES	SEVENS	EIGHTS	NINES		
$1 \times 6 = 6$	$1 \times 7 = 7$	$1 \times 8 = 8$	$1 \times 9 = 9$		
$2 \times 6 = \dot{12}$	$2 \times 7 = 14$	$2 \times 8 = 16$	$2 \times 9 = 18$		
$3 \times 6 = 18$	$3 \times 7 = 21$	$3 \times 8 = 24$	$3 \times 9 = 27$		
$4 \times 6 = 24$	$4 \times 7 = 28$	$4\times8=32$	$4\times9=36$		
$5 \times 6 = 30$	$5 \times 7 = 35$	$5 \times 8 = 40$	$5 \times 9 = 45$		
$6 \times 6 = 36$	$6 \times 7 = 42$	$6 \times 8 = 48$	$6 \times 9 = 54$		
$7 \times 6 = 42$	$7 \times 7 = 49$	$7 \times 8 = 56$	$7 \times 9 = 63$		
$8 \times 6 = 48$	$8 \times 7 = 56$	$8 \times 8 = 64$	$8 \times 9 = 72$		
$9 \times 6 = 54$	$9 \times 7 = 63$	$9\times8=72$	$9 \times 9 = 81$		
$10 \times 6 = 60$	$10 \times 7 = 70$	$10 \times 8 = 80$	$10 \times 9 = 90$		
$11 \times 6 = 66$	$11 \times 7 = 77$	$11 \times 8 = 88$	$11 \times 9 = 99$		
$12 \times 6 = 72$	12 × 7 = .84	12 × 8 = 96	$12 \times 9 = 108$		

Tens	ELEVENS	TWELVES
1 × 10 = 10	1 × 11 = 11	$1 \times 12 = 12$
$2 \times 10 = 20$	$2 \times 11 = 22$	$2\times 12 = 24$
$3 \times 10 = 30$	3 × 11 = 33	$3\times 12=~36$
$4\times10=40$	4 × 11 = 44	$4\times12=48$
$5 \times 10 = 50$	$5 \times 11 = 55$	$5\times12=60$
$6 \times 10 = 60$	$6\times11=66$	$6\times12=72$
$7 \times 10 = 70$	$7 \times 11 = 77$	$7 \times 12 = 84$
$8 \times 10 = 80$	8 × 11 = 88	$8 \times 12 = 96$
$9 \times 10 = 90$	9 × 11 = 99	$9\times12=108$
$10\times10=100$	$10 \times 11 = 110$	$10 \times 12 = 120$
$11\times10=110$	11 × 11 = 121	$11 \times 12 = 132$
$12 \times 10 = 120$	$12\times11=132$	$12\times12=144$

Emphasize:
$$-6 \times 8 = 48$$
 $7 \times 7 = 49$ $6 \times 9 = 54$ $7 \times 8 = 56$ $8 \times 9 = 72$ $6 \times 12 = 72$

Notice: — The unit figures of the nines' table added make the sum of nine.

$$8 \times 9 = 72$$
 $7 + 2 = 9$ $7 \times 9 = 63$ $6 + 3 = 9$

Memorize counting by twos:—2, 4, 6, 8, 10, etc. Similarly, memorize counting by threes, fours, etc.

Factor simply the products in the fours' table

$$4 = 2 \times 2$$
 $8 = 2 \times 2 \times 2$ $12 = 2 \times 2 \times 3$ etc.

Similarly, factor the higher tables, —

$$144 = 2 \times 72 = 2 \times 2 \times 36$$
 $99 = 3 \times 3 \times 11$
 $80 = 2 \times 4 \times 10$ $72 = 3 \times 3 \times 8$

Convert into division tables, —

$$20+2=10$$
 $22+2=11$ $24+2=12$
 $30+3=10$ $33+3=11$ $36+3=12$
 $40+4=10$ $44+4=11$ $48+4=12$
etc. etc.

MAKING A GENERAL MULTIPLICATION TABLE

1	2	3	4	5	6	7	8	9	10	11	12
2	4	6	8								
3	6	9	12								
4	8	12	16								
5					30			45			
6				30							72
7							56				
8						56	64				
9			36						90		
10								90			
11										121	
12					72						144

On a sheet of paper mark off 144 half-inch squares. Copy accurately the numbers here. Fill in each blank square with the product of the numbers at the head of the column and at the left end of the row. $4 \times 2 = 8$ and $2 \times 4 = 8$. $11 \times 11 = 121$ and $12 \times 12 = 144$.

The product of two or more even numbers is always even. The product of one even and one odd number is always even. The product of an odd number of odd numbers is always odd.

DIVISION

By division, we find how many times one number contains another, or we separate a number into equal parts.

The number to be divided is called the dividend. The number by which we divide is called the divisor. The quotient shows how many times the divisor is contained in the dividend. 8 + 4 = 2. Eight divided by four is two.

- 1. Divide 696 by 3.
- 3 is contained in 6 hundreds, 2 (hundreds) $3)\underline{696}$ times. Write 2 in hundreds' place in quotient. 3 is contained in 9 tens, 3 (tens) times. Write 3 in tens' place in quotient. 3 is contained in 6 units, 2 (units) times. Write 2 in units' place in quotient.
 - 2. Divide 9880 by 2, 3, 4, 5, 6, and 7.
 - 3. Divide 14,528 by 3, 6, 8, 2, 4, and 7.

Long Division

1. Divide 4635 by 13.

$13)4635(356\frac{7}{18}$	13 is contained in 46 hundreds, 3
39	(hundreds) times, and 7 hundreds remain-
73	ing. Bring down the 3. 13 is contained
<u>65</u>	in 73 tens, 5 (tens) times, and 8 tens
85	remaining. Bring down the 5. 13 is
<u>78</u>	contained in 85 units, 6 (units) times, and
7	7 remaining. The quotient is $356\frac{7}{13}$.

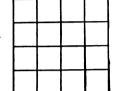
- 2. Divide 84.695 by 15.
- 3. Divide 16,844 by 26.
- 4. Divide 98,367 by 48.
- **5.** Divide 68,489 by 53.

- 6. Divide 208,479 by 34.
- 7. Divide 491,608 by 42.
- 8. Divide 638,415 by 75.
- 9. Divide 944,721 by 81.

FRACTIONS

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- 1. Point out $\frac{1}{2}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{6}$, and $\frac{1}{12}$ of this oblong.
- 2. See that $\frac{1}{2} = \frac{2}{4} = \frac{6}{12}$.
- 3. See that $\frac{1}{8} = \frac{2}{6} = \frac{4}{12}$.
- 4. Point out $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{1}{16}$ of this square.



- 5. See that $\frac{1}{2} = \frac{2}{4} = \frac{4}{8} = \frac{8}{16}$.
- 6. See that $\frac{1}{4} = \frac{2}{8} = \frac{4}{16}$.
- 7. See that $\frac{3}{4} = \frac{6}{8} = \frac{12}{16}$.
- 8. See that $\frac{5}{8} = \frac{10}{16}$, $\frac{7}{8} = \frac{14}{16}$, $\frac{2}{16} = \frac{1}{8}$, $\frac{8}{16} = \frac{4}{8}$, $\frac{8}{8} = \frac{6}{16}$.
- 9. There are 16 ounces in a pound. $\frac{1}{4}$ of a pound is how many ounces?
 - 10. How many days are there in \(\frac{1}{6} \) of a year?
 - 11. Which is the larger fraction, $\frac{1}{4}$ or $\frac{1}{6}$ of the same thing?
- 12. George is 15 years old and his brother John is $\frac{1}{8}$ as old. How old is John?
- 13. How many fourths are there in an orange? How many fourths are there in two oranges? How many eighths are there in two oranges?
 - 14. If $\frac{2}{3}$ of a boy's money equal 18, how much does $\frac{1}{9}$ equal?
 - 15. How many apples are there in $\frac{3}{4}$ of a dozen?
- 16. If $\frac{1}{12}$ of a pound of butter is worth 2 %, how much is a pound worth?
 - 17. $\frac{1}{4}$ of 64 cents = how many cents? $\frac{1}{2}$? $\frac{1}{8}$? $\frac{1}{16}$? $\frac{1}{82}$?
 - 18. If you had \ of anything, should you have \ of it?

REVIEW

Sui	btract	•
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1.	2.	8.	4.
804,697	9,693,419	46,821	896,675
38,915	7,799,655	23,916	254,783
Add:			•
5.	6.	7.	8.
68,405	2,914,608	9,642,314	8,463,024
945,716	4,685,715	1,207,608	2,755,698
3,910	9,424,836	7,935,296	8,433,954
1,213,459	8,005,607	8,468,781	3,938,618
395,824	7,234,721	933,677	6,753,439

- 9. Write in words: 7, 234, 721, 636, 455, 807, 917, 981, 476, 1776, 4208, 6895.
- 10. Write in figures: M, CCXLI, LXXXIV, CMIX, MCMI, XXXIX, DCXLVIII, LIII, XXVI, LXV.

Multiply:

11.	12.	13.	14.	15.	16.	17.	18.	19.
814	837	757	387	507	63 0	293	698	495
27	_91	_24	_57	_32	<u>46</u>	47	_93	_53

Find how many times the divisor is in the dividend:

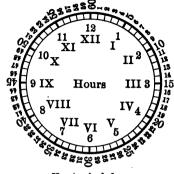
20.	6 in 246.	24.	284 in 684.	28.	625 in 3125.
21.	9 in 819.	25.	56 in 295.	29.	481 in 4286.
22.	7 in 497.	26.	14 in 416.	30 .	317 in 689.
23.	4 in 648.	27.	87 in 910.	31.	436 in 1026.

- 32. What is the ratio of 16 to 64? Of 64 to 16?
- 33. What is the ratio of 8 to 24? Of 1 to 3? Show by drawings that the ratio of 8 to 24 = the ratio of 1 to 3.

TELLING TIME



Fifteen minutes after six o'clock.



Key to clock face

Draw on the blackboard or on paper:

- 1. Ten minutes after seven.
- 2. Twenty-five minutes of eleven.

ROMAN NUMERALS

I=1	V=5	X=10	L=50	C = 100	D=500	M =	1000
I:	= one	= 1	XIX	= nine	eteen	=	19
II :	= two	= 2	$\mathbf{X}\mathbf{X}$	= twe	nty	=	20
III :	= three	= 3	XX	X = thir	ty	=	30
IV:	= four	= 4	${f L}$	= fifty	-	=	50
V:	= five	= 5	\mathbf{XL}	= fort	y	=	40
VI:	= six	= 6	$\mathbf{L}\mathbf{X}$	= sixt	y	=	60
VII :	= seven	= 7	\mathbf{XC}	= nine	\mathbf{ty}	=	90
VIII :	= eight	= 8	\mathbf{C}	= one	hundred	=	100
IX:	= nine	= 9	\mathbf{CC}	= two	hundred	=	200
\mathbf{X}	= ten	=10	D	= five	hundred	=	500
XI =	= elever	n = 11	M	= one	thousand	_	1000

FRACTIONS

 $\frac{1}{2}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{6}$, $\frac{1}{10}$, $\frac{1}{12}$, are fractions. So also are $\frac{2}{8}$, $\frac{2}{4}$, $\frac{2}{8}$, $\frac{$

When fractions are written in figures, the number below the line, called "the denominator," tells into how many parts the thing is divided, and the number above the line, called "the numerator," tells how many parts are taken. $\frac{1}{12}$ means that there are 12 equal parts, and we are taking 5 of them.

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				TIL	

- 1. Draw on the blackboard forms of figures showing halves, thirds, quarters, fifths, sixths, sevenths, eighths, ninths, tenths, twelfths, twentieths, and fortieths.
- 2. Tell why the larger the number of parts of anything, the smaller each part is.
- 3. What is $\frac{1}{2}$ of $\frac{1}{2}$? $\frac{1}{2}$ of $\frac{1}{3}$? $\frac{1}{3}$ of $\frac{1}{2}$? $\frac{1}{4}$ of $\frac{1}{2}$? $\frac{1}{2}$ of $\frac{1}{3}$? $\frac{1}{2}$ of $\frac{1}{3}$? $\frac{1}{2}$ of $\frac{1}{3}$? $\frac{1}{3}$ of $\frac{1}{3}$? $\frac{1}{3}$ of $\frac{1}{3}$? $\frac{1}{3}$ of $\frac{1}{3}$?

CHANCELLOR - SHORT COURSE - 12

FRACTIONS

The equal parts of numbers are called fractions.

- 1. $\frac{1}{2}$ of $6 = \frac{6}{3}$. Six halves are three wholes or units because two halves equal one whole, and six are three times two. $\frac{4}{3} = 3$. $\frac{1}{3}$ of 6 = 3. $\frac{1}{3} \times 6 = \frac{4}{3} = 3$.
 - **2.** $\frac{1}{2}$ of $8 = \frac{8}{2}$. $\frac{8}{2} = 4$. $\frac{1}{2}$ of 8 = 4. $\frac{1}{2} \times 8 = 4$.
- 3. $\frac{1}{3}$ of $6 = \frac{6}{3}$. Six thirds are two wholes, or units, because three thirds equal one whole, and 6 are two times three. $\frac{6}{3} = 2$. $\frac{1}{3}$ of 6 = 2. $\frac{1}{3} \times 6 = \frac{6}{3} = 2$.
 - 4. $\frac{1}{3}$ of $9 = \frac{9}{3}$. $\frac{9}{3} = 3$. $\frac{1}{3}$ of 9 = 3. $\frac{1}{3} \times 9 = 3$.
 - 5. $\frac{1}{2}$ of 10 = ? 6. $\frac{1}{2}$ of 12 = ? 7. $\frac{1}{2}$ of 14 = ?
- 8. $\frac{1}{3}$ of 16 = ? 9. $\frac{1}{3}$ of 12 = ? 10. $\frac{1}{4}$ of 15 = ?
- 11. $\frac{1}{2}$ of 18 = ? 12. $\frac{1}{2}$ of 21 = ? 13. $\frac{1}{2}$ of 16 = ?
- 14. $\frac{2}{3}$ of 9 = ? $\frac{2}{3}$ of $9 = \frac{18}{3}$ because 9 times two thirds are 18 thirds. $\frac{18}{3} = 6$, because $18 \div 3 = 6$.
 - 15. $\frac{2}{3}$ of 12 = ? $\frac{2}{3} \times 12 = \frac{24}{3} = 8$.
 - 16. $\frac{1}{2}$ of 8 = ? $\frac{1}{2} \times 8 = \frac{8}{2} = 2$.
 - 17. Find \(\frac{2}{4} \) of 8, \(\frac{2}{4} \) of 12, \(\frac{2}{4} \) of 20.
 - 18. Find $\frac{2}{3}$ of 10, $\frac{2}{3}$ of 15, $\frac{2}{3}$ of 20, $\frac{2}{3}$ of 25.
 - 19. Find \(\frac{2}{3}\) of 15, \(\frac{2}{3}\) of 30, \(\frac{2}{3}\) of 40.
 - 20. What are $\frac{2}{3}$ of 18? 15? 21? 24? 27? 30?
 - 21. Find ‡ of 20, 10, 15, 5, 25, 30, 35, 40.
 - 22. Find $\frac{2}{6}$, $\frac{4}{6}$, and $\frac{5}{6}$ of 18, 6, 12, 24, 30, 36, 42, 48.
 - 23. Find \$\frac{2}{7}\$, \$\frac{2}{7}\$, \$\frac{4}{7}\$, \$\frac{5}{7}\$, and \$\frac{6}{7}\$ of 14, 7, 21, 28.
 - 24. What are $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, and $\frac{7}{8}$ of 16, 8, 24, 32, 40?
 - 25. What is $\frac{1}{12}$ of 24? 60? 144? 288?

ADDITION OF FRACTIONS

The least common denominator (L.C.D.) of two or more fractions is the least common denominator to which they can all be reduced. The least common denominator must be the least common multiple of the denominators.

Before trying to find the least common denominator, reduce the fractions to their lowest terms.

1. Reduce $\frac{2}{6}$, $\frac{1}{4}$, and $\frac{3}{6}$ to a common denominator.

$$\begin{array}{c|c}
2 & 3 & 4 & 8 \\
2 & 3 & 2 & 4 \\
\hline
3 & 1 & 2
\end{array}$$

$$2 \times 2 \times 3 \times 2 = 24$$
.

3)24
$$8 \times 1 = 8$$
. $\frac{1}{3} = \frac{8}{24}$

$$4)24 \quad 6 \times 1 = 6. \quad \frac{1}{4} = \frac{6}{24}.$$

$$8)\underline{24}$$
 $3 \times 3 = 9$. $\frac{3}{8} = \frac{9}{24}$.

 $\frac{2}{3}$ in its lowest terms is $\frac{1}{3}$.

We find the least common multiple of the denominators 3, 4, and 8, and divide it by the denominator of each fraction.

Each quotient multiplied by the numerator of the fraction gives the new numerator for the fraction.

2. Add
$$\frac{2}{6}$$
, $\frac{1}{4}$, and $\frac{8}{6}$.
 $\frac{2}{6} + \frac{1}{4} + \frac{8}{8} = \frac{8}{24} + \frac{6}{24} + \frac{9}{24} = \frac{28}{24}$.

To add fractions, first reduce them to a common denominator; then add the numerators.

3. Add
$$\frac{1}{6} + \frac{2}{15} + \frac{1}{8} + \frac{3}{10}$$
.

5. Add
$$\frac{1}{4} + \frac{2}{3} + \frac{5}{63} + \frac{1}{8}$$
.

6. Add
$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{2}{4}$$
.

7. Add
$$\frac{3}{10} + \frac{5}{12} + \frac{7}{80} + \frac{3}{40}$$
.

9. Add
$$\frac{1}{16} + \frac{3}{7} + \frac{9}{10} + \frac{3}{4}$$
.

10. Add
$$\frac{7}{8} + \frac{1}{4} + \frac{5}{8} + \frac{9}{10}$$
.

11. Add
$$\frac{7}{5} + \frac{2}{5} + \frac{1}{3} + \frac{6}{11}$$
.

12. Add
$$\frac{9}{12} + \frac{3}{4} + \frac{5}{8} + \frac{2}{8}$$
.

13. Add
$$\frac{8}{15} + \frac{11}{15} + \frac{18}{15} + \frac{17}{15}$$
.

14. Add
$$\frac{3}{18} + \frac{3}{21} + \frac{4}{16} + \frac{3}{22}$$
.

SUBTRACTION OF FRACTIONS

To subtract one fraction from another, reduce the fractions to equivalent fractions having the least common denominator. Then subtract the numerator of the subtrahend from the numerator of the minuend, and write the result over the common denominator.

1. Find the value of $\frac{5}{7} - \frac{2}{3}$.

$$\frac{4}{7} - \frac{2}{8} = \frac{14}{21} - \frac{14}{21} = \frac{1}{21}$$

Find the value of:

2.
$$\frac{7}{8} - \frac{4}{21}$$
. 7. $\frac{11}{25} - \frac{1}{8}$. 12. $\frac{27}{86} - \frac{4}{9}$. 17. $\frac{96}{100} - \frac{41}{54}$.

3.
$$\frac{19}{26} - \frac{11}{16}$$
. 8. $\frac{3}{5} - \frac{1}{6}$. 13. $\frac{35}{36} - \frac{5}{8}$. 18. $\frac{7}{8} - \frac{19}{46}$.

4.
$$\frac{111}{200} - \frac{1}{10}$$
. **9.** $\frac{9}{16} - \frac{8}{8}$. **14.** $\frac{48}{90} - \frac{5}{20}$. **19.** $\frac{9}{10} - \frac{88}{72}$.

5.
$$\frac{1}{20} - \frac{1}{200}$$
. 10. $\frac{7}{8} - \frac{4}{5}$. 15. $\frac{60}{85} - \frac{7}{18}$. 20. $\frac{16}{18} - \frac{77}{36}$.

6.
$$\frac{17}{24} - \frac{7}{20}$$
. 11. $\frac{11}{12} - \frac{5}{8}$. 16. $\frac{72}{81} - \frac{11}{86}$. 21. $\frac{2}{8} - \frac{80}{120}$.

22. From 92_{11}^2 take $6\frac{1}{8}$.

$$92\frac{2}{11} - 6\frac{15}{16} = 92\frac{32}{176} - 6\frac{155}{176} = 91 + 1\frac{32}{176} - 6\frac{155}{176} = 91\frac{278}{176} - 6\frac{155}{176} = 85\frac{476}{176}.$$

Since we cannot subtract $\frac{165}{176}$ from $\frac{82}{176}$, we take 1 from the minuend, and considering it as $\frac{176}{176}$, add it to $\frac{82}{176}$. $92\frac{82}{176} = 91\frac{298}{176}$.

- 23. In two days, a boy rode $65\frac{3}{10}$ mi. on his bicycle. On the first day, he rode $31\frac{7}{8}$ mi. How many miles did he ride the second day?
- 24. Mr. Smith is building a fence. In two days, he builds 2½ rd. On the first day, he builds 1½ rd. How many rods does he build the second day?

MULTIPLICATION OF FRACTIONS

- 1. Multiply $\frac{3}{19}$ by 4. This means repeat $\frac{3}{19}$ four times.
 - 2. Multiply $\frac{3}{8}$ by 6. $\frac{3}{8} \times 6 = \frac{3}{8} \times 6 = \frac{9}{4} = 2\frac{1}{4}$.

First cancel the factors common to denominator and multiplier. Then multiply. Reduce the resulting fraction to a mixed number.

3. Multiply § by 12.

4. Multiply
$$\frac{9}{12}$$
 by 8. $\frac{9}{9} \times 8 = 6$.

$$\frac{5}{6} \times \frac{2}{12} = 10.$$

Multiply:

5.
$$\frac{9}{16} \times 10$$
.

5.
$$\frac{9}{16} \times 10$$
. 8. $\frac{869}{147} \times 49$.

11.
$$\frac{188}{188} \times 4$$
.

6.
$$\frac{18}{21} \times 9$$
. 9. $\frac{72}{96} \times 18$.

7.
$$\frac{18}{18} \times 11$$
. 10. $\frac{85}{108} \times 36$. 13. $\frac{28}{148} \times 74$.

$$\frac{4}{5} \times \frac{3}{7} = \frac{12}{35}$$

$$\begin{array}{c} 2 & 1 \\ 8 \times \frac{8}{4} = \frac{2}{3} \\ 3 & 1 \end{array}$$

To multiply one fraction by another, when possible, first cancel. Then find the product of the numerators for the new numerator and of the denominators for the new denominator.

Multiply:

16.
$$\frac{4}{5} \times \frac{10}{16}$$
.

19.
$$\frac{2}{8} \times \frac{4}{5} \times \frac{10}{16}$$
. 22. $\frac{13}{12} \times \frac{28}{120}$.

22.
$$\frac{13}{12} \times \frac{25}{120}$$

17.
$$\frac{7}{8} \times \frac{2}{21}$$
.

20.
$$\frac{27}{64} \times \frac{56}{81}$$
.

23.
$$\frac{98}{74} \times \frac{15}{96}$$
.

18.
$$\frac{13}{38} \times \frac{9}{39}$$
.

21.
$$\frac{40}{108} \times \frac{18}{2}$$
.

24.
$$\frac{5}{12} \times \frac{9}{20} \times \frac{18}{27}$$
.

DIVISION OF FRACTIONS

 $\frac{1}{8} \div 2 = \frac{1}{12}$. $\frac{1}{8} \div 4 = \frac{1}{12}$. $\frac{1}{8} \div 4 = \frac{1}{6}$. $\frac{1}{8} \div 2 = \frac{1}{4}$.

To divide a fraction by a whole number, multiply the denominator by that number, or divide the numerator by that number.

Divide:

1.
$$\frac{1}{7}$$
 by 3. 4. $\frac{14}{27}$ by 7. 7. $\frac{7}{18}$ by 2. 10. $\frac{18}{88}$ by 9.

2.
$$\frac{8}{25}$$
 by 5. **5.** $\frac{2}{9}$ by 7. **8.** $\frac{15}{21}$ by 5. **11.** $\frac{9}{14}$ by 3.

3.
$$\frac{9}{20}$$
 by 2. **6.** $\frac{6}{11}$ by 3. **9.** $\frac{8}{10}$ by 4. **12.** $\frac{16}{81}$ by 8.

To divide a fraction by a fraction, invert the divisor and multiply.

13. Divide
$$\frac{7}{12}$$
 by $\frac{9}{10}$.

14. Divide $\frac{4}{10}$ by $\frac{8}{30}$.

 $\frac{7}{12} + \frac{9}{10} = \frac{7}{12} \times \frac{10}{9} = \frac{35}{54}$.

 $\frac{4}{10} \div \frac{8}{30} = \frac{\frac{1}{4}}{10} \times \frac{30}{8} = \frac{3}{2} = 1\frac{1}{2}$.

Divide:

15.
$$\frac{9}{86}$$
 by $\frac{8}{4}$. 21. $\frac{9}{20}$ by $\frac{12}{8}$. 27. $\frac{5}{8}$ by $\frac{18}{8}$. 33. $\frac{42}{8}$ by $\frac{2}{8}$.

16.
$$\frac{1}{9}$$
 by $\frac{8}{10}$. 22. $\frac{9}{10}$ by $\frac{2}{7}$. 28. $\frac{8}{9}$ by $\frac{1}{8}$. 34. $\frac{20}{64}$ by $\frac{5}{8}$.

17.
$$\frac{8}{15}$$
 by $\frac{12}{26}$. 23. $\frac{2}{8}$ by $\frac{27}{28}$. 29. $\frac{9}{16}$ by $\frac{4}{82}$. 35. $\frac{96}{99}$ by $\frac{2}{8}$.

18.
$$\frac{7}{18}$$
 by $\frac{21}{72}$. **24.** $\frac{5}{8}$ by $\frac{6}{7}$. **30.** $\frac{24}{51}$ by $\frac{2}{17}$. **36.** $\frac{49}{58}$ by $\frac{7}{5}$.

19.
$$\frac{9}{49}$$
 by $\frac{108}{112}$. 25. $\frac{14}{89}$ by $\frac{2}{26}$. 31. $\frac{19}{82}$ by $\frac{8}{8}$. 37. $\frac{16}{27}$ by $\frac{4}{10}$.

20.
$$\frac{18}{64}$$
 by $\frac{15}{22}$. **26.** $\frac{81}{144}$ by $\frac{9}{12}$. **32.** $\frac{1}{2}$ by $\frac{89}{42}$. **38.** $\frac{9}{50}$ by $\frac{2}{5}$.

39. What will be the cost of 9460 sq. ft. of land at $\$_{16}^{8}$ per square foot?

40. How much will 246 yd. of cloth cost at \$\frac{1}{6}\$ per yard?

REVIEW OF FRACTIONS

- 1. A money box contains 47 half-dollars, 36 quarters, 25 twenty-five cent pieces, 49 dimes, and 17 nickels. How much money is there in all?
- 2. When 25 laborers earn each \$\frac{1}{3}\$ per hour, how much do they all earn in 12 da. and 12 hr., reckoning 8 hr. to the day?
- 3. A grocer bought two tubs of butter, weighing together $75\frac{11}{2}$ lb. One tub when empty weighed $8\frac{1}{4}$ lb., and the other $9\frac{1}{8}$ lb. How much butter did he buy?
- 4. A clerk has a monthly income of \$70, and spends \$48\frac{2}{3} per month. How much does he save in a year?
- 5. What number multiplied by 5½ will give 292 for the product?
- 6. At \$9\frac{1}{2} a cord, how many cords of wood can be bought for \$277\frac{1}{2}?
- 7. John spent \$6\frac{4}{8} in 7 da. How much did he spend in one day at that rate?
- 8. When one yard of percale costs \$ \frac{3}{5}\$, how many yards can be bought for \$\frac{1}{2}\frac{5}{5}\$?
- 9. When 8 yd. of cloth costs \$8\frac{2}{2}\frac{1}{2}\$, what is the price per yard?
 - 10. How much will 584 lb. of tea cost at \$\frac{5}{8}\$ per pound?
- 11. How many pieces of cloth, each piece 2 decyd. long, can be cut from a bolt of cloth containing 66 yd.?
- 12. When $\frac{5}{6}$ of a barrel of flour costs \$5 $\frac{1}{6}$, what is the price per barrel?

REVIEW OF FRACTIONS

- 1. A child spilled first $\frac{1}{10}$ of a quart of milk and then $\frac{1}{2}$ of a quart. What part did she bring home?
- 2. A garden contains $185\frac{3}{8}$ sq. rd. in potatoes, $145\frac{4}{21}$ sq. rd. in cabbage plants, and $65\frac{4}{35}$ sq. rd. in onions. What is the area of the garden?
- 3. Mr. Johnson contracted to dig $3518\frac{1}{4}$ cu. yd. of earth. How much of his contract remained after digging $1660\frac{1}{12}$ cu. yd.?
- 4. A merchant sold 86 lb. of butter at $25\frac{3}{5}$ a pound, 98 doz. of eggs at $17\frac{2}{3}$ per dozen, and $63\frac{5}{16}$ gal. of milk at $24\frac{1}{2}$ per gallon. What was the total amount of sales?
- 5. A factory was worth \$18,464. Mr. Williams owned $\frac{3}{10}$ of it, but sold $\frac{5}{8}$ of his share at its full value. What sum did he receive for it?
- 6. A farmer exchanged with a grocer $\frac{15}{16}$ of a bushel of corn worth 64% per bushel for $6\frac{2}{3}$ lb. of bacon. How much did the grocer charge per pound for the bacon?
- 7. I bought 13½ A. of land and divided it into building lots of § of an acre each. How many building lots did I get?
- 8. Mr. Swan owes Mr. Davis \$35.28, and pays part of it in 33 yd. of dress goods at $82\frac{1}{2}$ per yard, and the remainder in calico at $4\frac{1}{2}$ per yard. How many yards of calico does Mr. Davis get?
- 9. How many acres does a farm contain, when $\frac{3}{18}$ of it is grass, $\frac{5}{86}$ is corn, $\frac{2}{3}$ is wheat, and the remaining 34 A. is oats?

UNITED STATES MONEY

10 mills = 1 cent. 100 cents = 1 dollar. 10 cents = 1 dollar. 10 dimes = 1 dollar.

We write nine dollars seventy-eight cents, \$9.78; twenty-five dollars eighteen cents, \$25.18; four dollars forty cents, \$4.40. A mill is $\frac{1}{10}$ of a cent. Mills are written at the right of cents. We write four cents six mills \$.046; one dollar seventeen cents eight mills, \$1.178.

- 1. What three coins together make \$.25?
- 2. What coins together make $12 \cancel{\ell}$? $18 \cancel{\ell}$? $28 \cancel{\ell}$? $35 \cancel{\ell}$? $49 \cancel{\ell}$? $54 \cancel{\ell}$? $67 \cancel{\ell}$? $75 \cancel{\ell}$? $91 \cancel{\ell}$? $84 \cancel{\ell}$? \$1.29?
 - 3. How many dimes should you give for $\$\frac{4}{5}$? For $\$\frac{1}{2}$?
- 4. How many mills are there in three quarters of a dollar?
 - 5. What is the largest silver coin? The smallest?
 - 6. $\$\frac{1}{2}$ expressed decimally is \$.50; $\$\frac{3}{4} = \$.75$.
- 7. Write decimally $\$\frac{1}{5}$, $\$\frac{1}{10}$, $\$\frac{1}{25}$, $\$\frac{1}{8}$, $\$\frac{1}{4}$, $\$\frac{1}{4}$, $\$\frac{1}{6}$, $\$\frac{7}{6}$, $\$\frac{4}{5}$, $\$\frac{3}{10}$, $\$\frac{3}{6}$, $\$\frac{3}{6}$, $\$\frac{3}{8}$, $\$\frac{3}{8}$.

Read and add:

8.	9.	10.	11.
\$ 2.27	\$ 28.11	\$ 99.81	\$. 86
4.00	17.4 3	20.14	1.14
56.00	493.19	936.08	.09
300.00	60.04	257.348	200.246
12.18	182.632	85.513	46.00

- 12. What is the difference between \$1\frac{3}{4} and \$1.75?
- 13. What is the difference between $\frac{1}{20}$ and a nickel?

UNITED STATES MONEY

1. How many dollars and cents are there in: 420 %? 328 %? 112 %? 249 %? 104 %? 297 %? 333 %? 219 %? 738 %?

Write decimally:

- 2. 7 dollars 3 dimes 4 cents 2 mills.
- 3. 2 dollars 0 dimes 8 cents 6 mills.
- 4. 316 dollars 4 dimes 9 cents 4 mills.

Add:				
5.	6.		7 .	8.
\$ 936.21	\$ 1	.00	\$4028.24	\$ 91.80
41.00	408	3.25	900.07	121.46
3.08	72	2.69	36.43	.37
709.56	38	3.41	7300.90	2081.51
\$ 1689.85				
Subtract:				
9.	10.	11.	12.	13.
\$800.00	\$928.31	\$ 5000.00	\$ 638.11	\$ 436.25
629.46	244.93	4999.99	391.56	2 11.44
\$ 170.54				
Multiply:			·	
14.	15.	16.	17.	18.
\$ 480.25	\$ 975.36	\$475.28	\$ 526.15	\$ 944.75
8	9	21	36	56
\$3842.00				
Divide:			,	
19.	2	10.	21.	
8)\$ 78.48	9)\$5621.69		\$68,168.23	+13 = ?
\$ 9.81				
22. \$78,6	56.25 ÷ 25 =	= ?	23. \$15,417 -	+36=?

BILLS

A bill is a statement of merchandise sold or services rendered.

Foot and receipt the following bills:

BILL

CHICAGO, ILL., June 12, 1902

1. Mr. Charles Adams,

200 Wabash Av., Chicago.

Bought of Jones & Co.

ILLAMO, CADA	TERMS.	CASH.
--------------	--------	-------

 1			7	1	一
10 lb. Java Coffee,	28 ¢	2	80		
6 lb. Sugar,	7¢		42		
12 lb. Rice,	8₹¢	1	00		
2 doz. cans Tomatoes,	at \$ 1	2	00		
6½ lb. Butter,	32 ¢	2	08	8	30
Received Payment,					

Jones & Co.

- 2. A. E. Arnold bought of C. D. Phelps of Montclair, N.J., 10 lb. Rice @ 8½ ; 16 lb. Sugar @ 7½ ; 6 lb. Lard @ 8 ; 20 lb. Cheese @ 12½ . Make out the bill in proper form and receipt it.
- 3. Herbert E. Johnston bought of Charles Wright, on account, 100 bbl. Mess Pork @ \$8.40; 100 bbl. St. Louis Flour @ \$6.30; 20 firkins Butter (56 lb. to the firkin) @ 20 \(\xi \) per pound; 100 lb. Rice @ 10 \(\xi \). Make out the bill in proper form and receipt it.

BILLS

Foot and receipt the following bills:	
1. C. W. Hammond bought of R. C. Mills,	
100 lb. Prime Butter @	2 8 f
50 lb. Cheese @	$12\frac{1}{2}f$.
5 bbl. St. Louis Flour @	\$6.30 .
25 bbl. Loaf Sugar (5746 lb.) @	6≉
20 bales Cloves (2820 lb.) @	25∮.
50 bags Rio Coffee (7900 lb.) @	15 ¢ .
2. C. E. Farrand sold A. D. Haines, on account,	
50 bbl. St. Louis Flour @	\$ 6.30.
25 bbl. Mess Pork @	\$8.20.
10 bbl. Coffee Sugar (2120 lb.) @	7 ¢.
20 chests Y. H. Tea (1360 lb.) @	45 €.
10 bags Rio Coffee (1580 lb.) @	16 €.
3. Frank Small bought of M. R. Johnson, on accou	nt,
10,000 Envelopes	per M.
	P 0
1½ gross Penholders @ \$3.60 per	gross.
$1\frac{1}{2}$ gross Penholders	gross.
10,000 sheets of paper @ \$2.80 per 6 gross Pens	gross. ream. gross.
10,000 sheets of paper @ \$2.80 per	gross. ream. gross.
10,000 sheets of paper @ \$2.80 per 6 gross Pens	gross. ream. gross. r pint.
10,000 sheets of paper	gross. ream. gross. r pint.
10,000 sheets of paper	gross. ream. gross. r pint. 7 \(\ell \). 5 \(\ell \).
10,000 sheets of paper	gross. ream. gross. r pint. 7 \nathenormal{e}. 5 \nathenormal{e}.
10,000 sheets of paper	gross. ream. gross. r pint. 7 \(\ell \). 5 \(\ell \).
10,000 sheets of paper	7 gross. ream. gross. r pint. 7 f. 5 f. 36 f. 45 f.
10,000 sheets of paper	7 gross. 7 ream. 7 gross. 7 pint. 7 \$\psi\$. 36 \$\psi\$. 45 \$\psi\$.
10,000 sheets of paper	7 gross. 7 ream. 9 gross. 7 pint. 7 f. 5 f. 36 f. 45 f.
10,000 sheets of paper	7 gross. 7 ream. 7 gross. 7 pint. 7 \$\psi\$. 36 \$\psi\$. 45 \$\psi\$.

BILLS

1. Render Account Sales:

ALBANY, N.Y., April 15, 1911.

Sold for account of A. D. Jones,

By H. M. CLARK & Co.

Oct.	1	75	bbl.	Green	ning	Ατ	oples	; (a)	\$ 3.20		.
"	2	20	"	Russ	_	1	P	(a)	\$ 2.80		
"	3	120	"	Baldy	wins			œ	\$3.50		ļ
."	4	100	46	Surp	rise			@	\$4.00		ļ
"	5	25	"	Ben 1	Dav	is		@	\$8.60		
		Frei	ght,		Cha 10 t	-		12 🕏	each		
		Drag	yage,	34	Ю	"	@	6 ¢		1	
		Insp	ectio	n, 34	Ю	"	@	2 ¢	"		į.
		Stor	age,	3 4	Ю	"	@	4 ¢	"		ı
		N	et Pr	oceed	s rei	nitt	ed				

2.

SAN FRANCISCO, CAL., May 18, 1911.

Sold for account of The St. Louis Trading Co.,

By Ellor & Hall.

May 1	25 coats	@ \$4.50
	48 vests	@ \$1.50
	7 doz. felt hats	@ \$ 27.00
	8 doz. pr. suspenders	@ \$4.25
	$\frac{1}{2}$ gr. pr. gloves	@ \$.80
	Charges	per pr.
	Expressage	\$ 12.00
)		

DATES

There are seven days in every week, at least four weeks or twenty-eight days in every month, twelve months in every year, and a hundred years in a century. We are living in the twentieth century. It is more than 1900 years since Jesus Christ was born. When we write letters, we put three facts at the top, called the date. We tell the year, the month, and the day of the month; sometimes, we tell also the day of the week. We may write the date, November 1, 1911, or Tuesday, Nov. 1, 1911. The calendar tells us the year, the month, the day of the month, and the day of the week.

This calendar is true for any month when the first day of the month falls on Sunday, and when the month has 31 days. It represents October, 1911, September, 1912, December, 1912, and June, 1913, save that June has 30 days.

The names of the months are: January, February, March, April, May, June, July, August, September, October, November, December.

Sunday	Monday	Tuesday	Wednesday	Thursday	Priday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

The year has 365 days, except "leap year," which has 366 days. In leap year, which comes every four years, February gains another day. Leap year numbers are always divisible evenly by four. 1912, 1916, and 1920 are leap years.

Thirty days hath September,
April, June, and November;
All the rest have thirty-one,
Excepting February alone.
Twenty-eight are all its store,
Till leap year gives it one day more.

Until the year 2100, every year we can divide by 4 will be leap year. We usually call thirty days a month, unless we know the exact month in question.

TABLES

LIQUID MEASURE

4 gills = 1 pint	4 gi. = 1 pt.
2 pints = 1 quart	2 pt. = 1 qt.
4 quarts = 1 gallon	4 qt. = 1 gal.

DRY MEASURE

2 pints = 1 quart	2 pt. = 1 qt.
8 quarts = 1 peck	8 qt. = 1 pk.
4 pecks = 1 bushel	4 pk. = 1 bu.

LINEAR MEASURE

12 inches = 1 foot	12 in. = 1 ft.
3 feet = 1 yard	3 ft. = 1 yd.
$5\frac{1}{2}$ yards = 1 rod	$5\frac{1}{2}$ yd. = 1 rd.
$16\frac{1}{2} \text{ feet } = 1 \text{ rod}$	$16\frac{1}{2}$ ft. = 1 rd.
320 rods = 1 mile	320 rd. = 1 mi.
280 feet = 1 mile	5280 ft. = 1 mi

AVOIRDUPOIS WEIGHTS

16 ounces = 1 pound	16 oz. = 1 lb.
100 pounds = 1 hundredweight	100 lb. = 1 cwt.
2000 pounds = 1 ton	2000 lb. $= 1$ T.

2240 pounds = 1 long ton (used for weighing coal at the mines and for merchandise at United States Custom Houses).

CUSTOMARY WEIGHTS

1 bushel of potatoes = 60 pounds 1 bushel of wheat = 60 pounds 1 barrel of flour = 196 pounds

CIRCULAR MEASURE

60 seconds = 1 minute	60'' = 1'
60 minutes = 1 degree	$60' = 1^{\circ}$
90 degrees = 1 quadrant	$90^{\circ}=1$ quad.
360 degrees = 1 circumference	$360^{\circ} = 1 \text{ circ.}$

TABLES

COUNTING MEASURE

12 units = 1 dozen	12 = 1 doz.
12 dozen = 1 gross	12 doz. = 1 gr.
12 gross = 1 great gross	12 gr. = 1 G. gr.
20 units $= 1$ score	20 = 1 sc.

SQUARE MEASURE

144 square inches	= 1 square for	ot $144 \text{ sq. in.} = 1 \text{ sq. ft.}$
9 square feet	= 1 square yar	rd $9 \text{ sq. ft.} = 1 \text{ sq. yd.}$
30½ square yards	= 1 square roo	$30\frac{1}{4} \text{ sq. yd.} = 1 \text{ sq. rd.}$
160 square rods	=1 acre	160 sq. $rd. = 1 A$.
43,560 square feet	= 1 acre	43,560 sq. ft. = 1 A.
640 acres	= 1 square mi	le or section

CUBIC MEASURE

1728 cubic inche	s = 1 cubic foot	1728 cu. in. = 1 cu. ft.
27 cubic feet	= 1 cubic yard	27 cu. ft. = 1 cu. yd.

CORD MEASURE

16 cubic feet $= 1$ cord foot	16 cu. ft. = 1 cd. ft.
128 cubic feet = 1 cord	128 cu. ft. $= 1$ cd.

TIME MEASURE

60 seconds = 1 minute	60 sec. = 1 min.
60 minutes = 1 hour	60 min. = 1 hr.
24 hours = 1 day	24 hr. = 1 da.
7 days = 1 week	7 da. = 1 wk.
12 months = 1 year	12 mo. = 1 yr.
30 days count as 1 month usually	30 da. = 1 mo.
365 days count as 1 year usually	365 da = 1 yr.

EXERCISES IN LINEAR MEASURE

- 1. How many inches are there in 2 ft? In 1 yd.? In 1 rd.?
- 2. How many rods are there in ½ mi.? In ½ mi.? In 66 ft.? In 1½ mi.?
- 3. How many yards are there in 1 rd.? In 12 ft.? In 1 mi.? In 144 in.?
 - 4. What part of a yard is 1 ft.? $1\frac{1}{2}$ ft.? 9 in.?
- 5. How many kite strings 40 yd. long can be cut from a mile of string?
- 6. When a person walked 80 rd. and back, what part of a mile did he walk?
- 7. How many 6-ft. posts can be cut from a pole 30 yd. long?
- 8. How many leaps 4 yd. long will a fox take in running 1 mi.?
- 9. Since the ratio of 5 to 7 is $5+7=\frac{5}{7}$, what is the ratio of 3 to 5? Of 1 ft. to 1 yd.? Of 2 ft. to 1 yd.? Of 18 in. to 1 yd.?
 - 10. What is the ratio of 10 rd. to $\frac{1}{2}$ of a mile?
- 11. A and B start from the same place and travel in opposite directions, A at the rate of 40 rd. in 3 min., B at the rate of 1 mi. in 5 min. How many miles apart are they in 1 hr.?
- 12. If A and B had traveled in the same direction on conditions named in problem 11, how far apart would they have been in 1 hr.?
- 13. How many boards 15 ft. long, 1 ft. wide will be required to build a 4-ft. tight board fence around a lot 30 yd. long and 20 yd. wide?

SQUARE MEASURE

Square measure is used in measuring surfaces.

A surface having four straight sides and four equal angles is a rectangle.

Figures A and B are rectangles; B is also called a square.

A

The measuring unit of a surface is a square,

The measuring unit of a surface is a square, and the area of a surface is the number of squares it contains.



The square inch (sq. in.) is the measuring unit for small surfaces.

The square foot (sq. ft.) is used in measuring lumber; the square yard is used in estimating areas of floors, walks, etc.

The square rod (sq. rd.) and the acre (160 sq. rd.) are used as the measuring units for States, countries, etc.

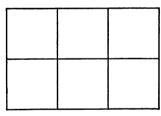


Fig. 1.

Figure 1 represents a rectangular surface 2 ft. wide and 3 ft. long. It contains 1 sq. ft. 6 times; hence, its area equals 6 sq ft., but the number 6 is the product of the numbers expressing the length and the width of the rectangle. Hence,

The area of a rectangle is equal to the product expressed in square measure of the numbers representing its length and its width expressed in corresponding units of linear measure.

The dimensions, that is the length and width, must be of the same denomination.

A scale is a device for representing large dimensions by units of smaller dimensions, as, for example, 1 ft. by 1 in., 1 yd. by $\frac{1}{2}$ in. Draw to a suitable scale a rectangle 5 ft. $\times 3\frac{1}{2}$ ft.

EXERCISES IN SQUARE MEASURE

- 1. How many square inches (sq. in.) are there in $\frac{2}{3}$ sq. ft.? In $\frac{2}{3}$ of a square foot? In a square yard?
- 2. How many square inches are there in a piece of cardboard 1 ft. long and 8 in. wide? In one a yard long and 9 in. wide?
- 3. How many square feet of oilcloth are there in a piece 3 yd. square? In a piece 18 in. wide and 2 yd. long?
- 4. How many square yards are there in a floor 12×15 ft.? In one 18×21 ft.?
- 5. How much will it cost to pave a street 60 ft. wide and $\frac{1}{4}$ mile long at 50 % a square yard?
- 6. What is the difference between a square yard and 3 sq. ft.? Between a 6-in. square and 6 sq. in.?
- 7. How many acres are there in a lot 40 rd. long and 20 rd. wide?
- 8. How many square yards are there in a square lot, the distance around it being 176 yd.?
- 9. A lot containing 63 sq. rd. is 9 rd, long. How wide is it?
- 10. A field containing 10 A. is 20 rd. wide. How long is the field?
- 11. How much will it cost to fence a 5-A. field whose width is 16 rd. at 75 \(\varphi \) a rod?
- 12. Find the cost of a brick pavement 30 ft. long and 6 ft. wide at 75 / 2 a square yard.
- 13. How many square feet are there in a piece of cilcloth 6 ft. long and 10 in. ($\frac{19}{2}$ or $\frac{5}{6}$ ft.) wide? In one 20 ft. long and 9 in. ($\frac{3}{4}$ ft.) wide?
- 14. How many square yards are there in a walk 30 yd. long and 4 ft. (1½ yd.) wide?

DRY MEASURE

Dry measure is used in measuring all kinds of seeds, grains, vegetables, and fruits.

- 1. How many pints are there in 2 qt.? In \(\frac{1}{4}\) gal.? In 2 gal.?
- 2. How many quarts are there in ½ pk.? In 2 pk.? In 6 pt.?
- 3. How many 1-pt. paper sacks will be needed to hold 1 pk. of peanuts?
 - 4. How much will 7 bu. of potatoes cost at 35 / a peck?
- 5. What amount of money was made by selling 10 bbl. of apples (2½ bu. each) at 45% a peck, the cost being \$3 per barrel?
- 6. If $3\frac{1}{2}$ bu. of clover seed is to be divided equally among 16 men, how many quarts should each receive?
 - 7. 4 qt. are what part of a peck? Of 1 bu.?
 - 8. 1 pk. is what part of 64 pt.? Of 2½ bu.?
- 9. When clover seed sells at \$8 per bushel, how much should you measure out to a customer for \$3?
- 10. How many 3-pk. sacks will be needed to sack 21 bu. of seed?
- 11. When wheat is worth 80 \(\nabla \) a bushel, how much should be received for 50 \(\nabla \)?
- 12. If a man paid \$2 a bushel for apples, how much should he charge a peck so as to make \$1 per bushel?
- 13. What will be the cost of paper sacks, 1 qt. each, at 5 \notin a dozen, to sack 15 bu. of peanuts?
- 14. What part of 3 pk. is 6 qt.? 6 in. is what part of $\frac{3}{2}$ yd.?

LIQUID MEASURE

Liquid measure is used in measuring most liquids.

- 1. In 2 qt. there are how many pints? How many half pints?
- 2. How many quarts are there in 12 pt.? In 3 gal.? In $2\frac{1}{2}$ gal.?
 - 3. Find the cost of 10 gal. of cream at 20 f a pint.
 - 4. How many pint bottles will 1½ gal. fill?
- 5. How many 2-qt. cans will be needed to hold 3½ gal. of jam?
- 6. How many half-gallon jugs will it take to hold the contents of 20 quart cans of vinegar?
- 7. If you paid 20% for a gallon of milk, for how much must you sell it per pint, to double your money?
- 8. How many 2-qt. bottles will be required to hold the contents of 120 half-pint bottles?
- 9. How much should you pay for 1½ gal. of milk that sells at 8% a quart?
- 10. How much should you charge a customer for 3 qt. of sirup that sells at 60 \(\neq \) a gallon?
 - 11. 5 pt. are what part of a gallon? Of \{ \frac{1}{2} gal. ?
- 12. What should you charge for 3 qt. and 1 pt. of sirup worth 80 per gallon?
- 13. How much sirup worth 60 \(\ell \) a gallon should you give a customer for 75 \(\ell \)?
- 14. If from a 5-gal. can you had sold 1 gal. to Mr. A., 1½ gal. to Mr. B., and two ½-gal. jugsful to Mr. C., how many pints would remain in the can?
- 15. Compare the bulk of 63 qt. of flour with that of 35 qt. of water.

AVOIRDUPOIS WEIGHT

Avoirdupois weight is used in weighing groceries and many kinds of coarse, heavy articles, such as coal, hay, grains, iron, lead, etc.

- 1. What part of a pound are 8 oz.? 4 oz.? 10 oz.? 12 oz.?
- 2. How much will 8 oz. of butter cost at 30% a pound? How much will 12 oz. cost?
- 3. How many hundredweight are there in 2 T.? In $\frac{1}{2}$ T.? In $\frac{1}{4}$ T.? In $\frac{1}{6}$ T.? In 600 lb.?
 - 4. Find the cost of 1700 lb. of coal at \$5 a ton.
- 5. When the strength of a wagon is 2.94 T., how many barrels of flour could you haul at a load?
- 6. When wheat sells at 75 ≠ a bushel, at what mark should you set the scales to give a customer \$9 worth?
- 7. How much should you charge for 3 lb. 8 oz. of butter worth 32 \notin a pound?
- 8. When hams sell at 8 \(\ell \) a pound, how much should you charge for one weighing 9 lb. 12 oz.?
- 9. How much should you pay for 12 cwt. of hay at \$15 per ton?
- 10. How should you set the scales to weigh out a dollar's worth of 40% tea?
- 11. What weight is on the floor of a bin containing 100 bu. of wheat?
- 12. What is the weight of 20 bbl. of flour? Of 10 bbl. of beef?
- 13. When a bushel of wheat makes 50 lb. of flour, how many barrels of flour can be made from 98 bu. of wheat?

- 1. At 60 / a dozen for the bottles and 10 / a dozen for the work, how much will it cost to bottle up 1 bbl. (31\frac{1}{2} gal.) of molasses in quart bottles?
- 2. When kerosene is bought at 14 \(\ell \) a gallon and sold at 3 \(\ell \) a pint, how many gallons must be handled to make a profit of \$200?
- 3. How many square rods are there in a lot 40 rd. long and 20 rd. wide?
- 4. Where land is worth \$125 per acre, what is the value of a farm 80 rd. long and 60 rd. wide?
- 5. At $50 \not \in$ per square foot, find the cost of a lot 55 yd. deep and 2 rd. frontage.
- 6. How much is a load of wheat weighing 2760 lb. (60 lb. to the bushel) worth, at $75 \rlap/e$ a bushel?
- 7. What is the value of 1280lb. of oats (32lb. to the bushel), at $30 \neq a$ bushel?
- 8. I paid \$3 for a bushel of timothy seed, and sold it at 50% a gallon. Did I gain or lose, and how much?
- 9. When a 150-lb. bale of hay lasts a horse 1 wk., how much will it cost to feed a horse 1 yr., at \$20 a ton for the hay?
- 10. A car containing 30 T. of coal will make how many loads of 15 cwt. each?
- 11. How many 12=oz. rolls can be made from 480 lb. of butter?
- 12. How many horseshoes weighing 1\frac{3}{4} lb. each can be made from 1120 oz. of bar iron?
- 13. How many 125-lb. bales of hay can be made from $1\frac{1}{2}$ T. of hay?

- 1. How many yards of ribbon will it take to make 18 hair ribbons 18 in. long?
- 2. How many belts 4 ft. long can be made from 3 bolts of braid of 8 yd. each?
- 3. How many yards of ribbon must be used for 18 hat ribbons 40 in. long?
- 4. How many square feet of flooring are there in a room 6 yd. long and 15 ft. wide?
- 5. How many square yards are there in a floor 12 ft. wide and 15 ft. long?
- 6. At 15 f a square yard, what will be the expense of plastering the ceiling of a room 30 ft. long and 18 ft. wide?
- 7. How many square yards of plastering are there in the walls and ceiling of a room 24 ft. long, 18 ft. wide, and 12 ft. high?
- 8. What is the total value of 2 doz. sacks, each containing 4 bu. of beans, and of 1 doz. baskets, each containing 6 qt. of beans at \$1.50 a bushel?
- 9. If from a sack containing 2 bu. of wheat there were sold to Mr. A. 20 lb., to Mr. B. 30 lb., and to Mr. C. 40 lb., how much is the remainder worth at 20 % a peck?
- 10. When a bushel of wheat yields 40 lb. of flour, how many barrels of flour can be made from 490 bu. of wheat?
- 11. What is the equal number of each, pint and quart cans, that will contain 9 gal.?
- 12. If a "pint's a pound," how many 2-oz. bottles will a gallon of oil fill?

- 1. How many square feet of lumber are there in a board 18 in. wide and 16 ft. long?
- 2. How much lumber is there in a board 9 in. (\frac{3}{4} ft.) wide and 4 yd. long?
- 3. How many pieces of zinc 11 ft. square can be cut from a piece 45 in. wide and 15 ft. long?
- 4. How much lumber 1 in. thick will be needed for a board walk 1½ yd. wide and 20 yd. long? How much will it cost at \$20 per M (thousand)?
- 5. A board containing 96 sq. in. is 1 ft. long. How wide is it?
- 6. I paid \$2 for a bushel of nuts and sold them at the rate of 10 \(\nu \) a quart. How much did I gain?
- 7. Having paid \$5 for $\frac{1}{2}$ mi. of string, I cut it into fish lines 5 yd. long and sold them at $5 \neq$ each. Did I gain or lose, and how much?
- **8.** Find the cost of fencing in a one-acre lot whose width is 10 rd., at 50% a rod for the fencing and 20% a rod for the work.
- 9. How many cows, each giving 4 gal. of milk daily, must be kept to supply 8 families with 1 pt. a day, 12 families with $\frac{1}{2}$ gal. per day, and 5 families with 1 gal. per day?
- 10. How much should you charge a customer for a ham weighing 15 lb. 10 oz., at 8 ≠ a pound?
- 11. Find the cost of $\frac{2}{3}$ of a ton of coal at $25 \, \rlap/e$ per hundredweight.
- 12. At what mark should the scales be set to weigh out 50% worth of 40% tea?

DENOMINATE NUMBERS

FUNDAMENTAL OPERATIONS

To add or to subtract compound denominate numbers, first change them to numbers of the same denomination, and then proceed as in ordinary addition or subtraction.

- Find the sum of 1 yd. 1 ft. 10 in.; and 3 yd. 2 ft. 8 in.
 1 yd. 1 ft. and 10 in. = 58 in.
 3 yd. 2 ft. and 8 in. = 140 in.
 198 in.
- 198 in. changed to higher denominations = 5 yd. 1 ft. 6 in.
- 2. Find the sum of 3 bu. 2 pk. 5 qt. 1 pt.; 2 bu. 3 pk. 6 qt. 1 pt.; and 4 bu. 3 pk. 2 qt. 1 pt.
- 3. In one bin was placed 5 T. 16 cwt. 35 lb. 12 oz. In another there was 3 T. 12 cwt. 70 lb. 10 oz. How much was there in both bins?

To multiply or to divide a compound denominate number by any quantity, first change it to a number of one denomination, and then proceed as in ordinary multiplication or division.

- 4. Multiply 3 pk. 3 qt. 1 pt. 3 pk. 3 qt. and 1 pt. by 3. equal 55 pt. Multiply the 3 pk. 24 qt. 27 qt. 55 pt. by 3. This gives 3 qt. 2 165 pt. Change the 165 27 at. 54 pt. pt. to higher denomina-1 pt. 165 pt. equal 2 bu. tions. 55 pt. 2 pk. 2 qt. and 1 pt.
 - 5. Multiply 3 gal. 2 qt. 1 pt. by 9.
 - 6. Divide 376 gal. 3 qt. 1 pt. by 9.
 - 7. Divide 328 yd. 1 ft. 3 in. by 21.
 - 8. Multiply 5 yd. 2 ft. 10 in. by 5.

- 1. At 65 // a square yard, find the cost of paving a street 500 ft. long and 43 ft. wide.
- 2. At \$2.50 an acre, find the cost of plowing a field 60 rd. long and 35 rd. wide.
- 3. Find the number of square feet in the walls of a room 25 ft. long, 18 ft. wide, and 19 ft. 6 in. high.
- 4. How much will it cost, at \$3.15 a square yard, to plaster a room 48 ft. long, 30 ft. wide, and 20 ft. high?
- 5. Find the cost of a farm $\frac{1}{2}$ mi. long and 120 rd. wide, at \$37 per acre.
- 6. At 75 \(\nabla \) a yard, how much will it cost to carpet a room 25 ft. long, 22 ft. wide, with carpet \(\frac{3}{4} \) of a yard wide?
- 7. At \$1.12 a yard, find the cost of carpeting a room 32 ft. long and 25 ft. wide with carpet $\frac{5}{8}$ of a yard wide.
- 8. How much will it cost, at 65 ≠ per square yard, to concrete a walk 250 ft. long and 15 ft. 3 in. wide?
- 9. How much will it cost, at 6 a square foot, to build a walk 9 ft. wide around the outside of a block 190 ft. square?
- 10. How much will it cost, at 15 \$\notin \text{ a square yard, to paper the walls and ceiling of a room 18 ft. long, 15 ft. wide, and 7 ft. high?
- 11. How much will it cost to plaster the sides and ceiling of a room 36 ft. 9 in. long, 23 ft. 4 in. wide, and 7 ft. high, at 23 \(\neq \) a square yard, if 28 sq. yd. are allowed for doors and windows?
- 12. How much would it cost to build an iron fence around a park a mile square, at \$4.75 a rod?
 - 13. How many hours are there in the month of July?

- 1. A dairyman sold buttermilk at 4 % a pint and paid for it at 25 % a gallon. How much would he gain in one week if he sold 15 qt. a day?
- 2. A skating rink 104 ft. by 196½ ft. was floored with 2-in. plank at \$22.50 per M. What was the cost of the lumber?
- 3. How many sheets of tin 18 in. by 14. in. will be required to cover a roof 65½ ft. wide and 158¼ ft. long?
- 4. How much will it cost, at \$1.25 a yard, to carpet a flight of stairs 12 ft. high, when the tread of each stair is 9 in. and the riser is 8 in.?
- 5. How many shingles averaging 4 in. wide and laid 4 in. to the weather will cover the roof of a barn, when one side of the roof is 34 ft. wide, and the other 42 ft. wide, and when the length of the barn is 65 ft.?
- 6. How many granite blocks 8 in. by 12 in. will be required to pave a mile of roadway 40 ft. in width?
- 7. I wish to floor and ceil a room $37\frac{1}{2}$ yd. long and 12 yd. 2 ft. wide, with matched pine. What will be the cost of the material at \$25.25 per M?
 - 8. Change 57,364 cu. ft. to cubic yards.
 - 9. How many cubic inches are there in 170 cu. ft.?
- 10. How much is a pile of wood 20 ft. long, 4 ft. wide, and 6 ft. 6 in. high worth at \$6.75 a cord?
- 11. When a pile of wood is 40 ft. long and 8 ft. wide, how high must it be to contain 20 cords? At \$5.75 per cord, what is its value?

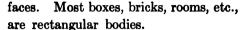
- 1. A farmer gathered a wagonload of apples from his orchard and sold them to a greengrocer at 85% a bushel. The grocer sold them at retail at 25% a half peck. If the farmer's wagon held 16 bu., what was the grocer's net profit?
- 2. A peach grower had 67 bu. of peaches on his trees. He paid 6 a peck to have them gathered and packed. The express charges to the nearest market were 20 a bushel. He sold them at 7 a quart. What profit did he make?
- 3. A party of 7 boys collected 28 qt. of blueberries and sold them at 26 \(\nabla \) a half peck. What was each boy's share of the money?
- 4. A peddler bought apples at 60 f per bushel. How much did he gain in a day's sale of 5 bu. 2 pk. of apples at 13 f a half peck?
- 5. A peanut vender sold peanuts at 5 % a half pint. He had bought them for \$3 a bushel. What was his gain on 24 bu.?
- 6. A peddler bought potatoes at 70% a bushel. How much did he gain in a day's sale of 6 bu. 3 pk. at 14% a half peck?
- 7. How much did a confectioner make on a sale of $327\frac{1}{2}$ boxes of salted almonds at 15% a box, when the almonds cost him \$15 a bushel, shelled and salted, and the boxes held half a pint?
- 8. It required 12 yr. and 6 mo. to build the Brooklyn Bridge. It was completed Jan. 3, 1890. When was its construction begun?

CUBIC MEASURE

Cubic measure is used in measuring solid bodies of three dimensions—length, breadth, and thickness.

The quantity of matter or space such bodies contain is called contents or volume.

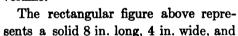
Rectangular bodies have six rectangular sides called



A rectangular solid having all its faces equal is called a cube.

The measuring units of solids are cubes of different dimensions, such as cubic inch, cubic foot, cubic yard, etc.

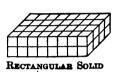
The number of cubic inches, cubic feet, cubic yards, etc., that a solid body contains expresses its contents or volume.



2 in. thick, and the number of cubic inches it contains (64) equals the continued product of the numbers expressing its three dimensions. $8 \times 4 \times 2 = 64$. The volume is 64 cu. in.

In calculating the volume of solids, etc., it is necessary to express all the dimensions in the same denominations.

- 1. How many cubic inches are there in a brick 8 in. long, 4 in. wide, and 2 in. thick?
- 2. How many cubic feet are there in a block of marble 4 ft. long, 3 ft. wide, and 2 ft. thick?
- 3. How many cubic yards are there in a cellar 5 yd. long, 4 yd. wide, and 6 ft. deep?





A CUBE

BOARD MEASURE

Board measure is used in measuring all kinds of sawed lumber—boards, planks, joists, studding, scantling, and timber. Pieces 4 in. wide and 2 in. thick, called 2×4 's (two by fours), are used for studding in walls of frame buildings, upon which the lath and siding are nailed. Pieces 6, 8, 10, or more inches wide and 2 in. thick are called planks; they are called joists when used in buildings for the purpose of nailing flooring upon them. The term board is generally understood to mean inch lumber. Pieces 4 in. wide, 3 in. thick $(3 \times 4$'s, three by fours), and 8, 10, 12 ft. long, or more, and 4×4 's, etc., are called scantling.

The unit of measure is the board foot, which is a board 1 ft. long, 1 ft. wide, and 1 in. thick, containing 1 sq. ft.



1 BOARD FOOT

of lumber, as shown in the adjacent cut. Such a board when 9 in. wide contains $\frac{9}{12}$ or $\frac{3}{4}$ of a square foot of lumber. Since each foot in length represents 1 sq. ft. of

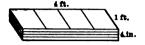
lumber, 4 ft. of length would represent 1 sq. ft. multiplied by 4, or 4 sq. ft. of lumber. If the board were 9 in. $(\frac{3}{4}$ ft.) wide, the four feet of length would represent $\frac{3}{4}$ sq. ft. \times 4, or 3 sq. ft. of lumber.

Therefore the number of square feet of lumber in an inch board equals the product of the numbers expressing its length and width in feet by the number expressing its thickness in inches.

The drawing upon this page represents a board in perspective. When you measure the rear edge of the board, you see that it is not really as wide as the front edge. Measure and determine to what scale the picture is drawn.

BOARD MEASURE

A stick of timber may be regarded as being made up of as many inch boards as there are inches in its thickness.

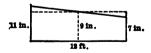


The figure represents a stick of timber 4 ft. long, 1 ft. wide, and 4 in. thick. The top section represents 4 sq. ft. Since the stick is 4 in. thick, there are four sections, hence, the stick contains 4 sq. ft. \times 4, or 16 sq. ft. of lumber.

A stick 12 ft. long, 9 in. ($\frac{3}{4}$ ft.) wide, and 8 in. thick contains 8 times the product of the length (12 ft.) and width ($\frac{3}{4}$ ft.), or $12 \times \frac{3}{4} \times 8$, which equals 72 sq. ft.

Observe that of the three dimensions two (width and length) are in feet, while the other (thickness) is in inches; the product of these three dimensions thus expressed equals the number of square board feet of lumber.

Lumber less than 1 in. thick is regarded in trade just as though it were an inch thick; thus, a board 4 ft. long, 1 ft. wide, and $\frac{1}{2}$ in. thick sells as 4 sq. ft. of lumber. But such a board $1\frac{1}{2}$ in. thick sells for all there is in it, viz. 6 sq. ft.



This figure represents a board 12 ft long, 11 in. wide at one end, 7 in. wide at the other. The average width is one half the sum of 11 in. and 7 in., which is 9 in., or $\frac{3}{4}$ ft. Hence, 12 sq. ft. $\times \frac{3}{4}$ = the number of square feet in the board, which is 9.

EXERCISES IN BOARD MEASURE

- 1. What is the amount of lumber in a board 18 ft. long and 16 in. ($\frac{1}{2}$ ft.) wide?
- 2. How much lumber is there in a load containing 30 boards, each 16 ft. long and 9 in. wide?
- 3. Find the cost of 10 planks, each 12 ft. long, 1 ft. wide, and 2 in. thick @ 3 \(\nabla \) per board foot.
- 4. How many boards 12 ft. long and 4 in. wide are required for a floor 24 ft. long and 21 ft. wide? How much lumber is there in all?
- 5. How much should you charge for a stick of timber 8 by 10 in., 12 ft. long, when lumber is worth \$30 per M (thousand)?
- 6. How many feet of lumber are there in a board 16 ft. long and 19 in. wide at one end, and 11 in. at the other?
- 7. How much lumber will be req ired for a tight board fence 6 ft. high around a lot 50×100 ft.?
- 8. In the fence (prob. 7) the lumber is worth \$20 per M, the posts, 10 ft. apart (30 in all), cost $10 \neq$ each, and the railing, upper and lower, is of 2×4 's, the work costing $25 \neq$ a yard. Find the cost of the fence.
- 9. How much lumber is there in a 3-in. plank 12 ft. long and 10 in. wide?
- 10. How much lumber is there in a board 18 in. wide at one end, and tapering to a point, when the length is 16 ft.?
- 11. How much lumber can be cut from a stick of timber 10 in. square and 12 ft. long, when $\frac{1}{6}$ in. is allowed for each saw cut?

- 1. A farmer raised 24 T. 17 cwt. of hay. He sold 5 loads, each weighing 1 T. 8 cwt. 21 lb. How much had he remaining?
- 2. Mr. A., who had bought 2 A. 140 sq. rd. of land, reserved \(\frac{1}{2}\) an acre for himself, and then divided the remainder into 4 equal lots. How much land did each lot contain?
- 3. How many steps of 30 in. each will a person take in walking 12 mi.?
- 4. How many revolutions will a wheel 13 ft. 4 in. make in running 12 mi.?
- 5. How much sugar at 9 a pound must be given for 2 cwt. 43 lb. of pork at 6 a pound?
- 6. How many cubic feet of air are there in a room 6 yd. long, 16 ft. wide, 10 ft. high?
- 7. When 720 bu. of potatoes are put into 192 bbl., how many bushels are there in each barrel?
- 8. How many rods of fence will be required to inclose a section of land?
- 9. When a cubic foot of granite rock weighs 175 lb., how many tons will a cubic yard weigh?
- 10. When $\frac{7}{8}$ of an acre of land costs \$126, how wide a strip can be purchased from a tract 120 rd. deep, for \$8640?
- 11. When a man travels 3 mi. 80 rd. an hour, how many days will it take him to go 234 mi., traveling 12 hr. a day?
- 12. How many fence pickets 2 ft. 4 in. long and 3 in. wide can be cut from a board 14 ft. long, 1½ ft. wide, when cuts are not considered?

- 1. How many acres are there in a street 66 ft. wide and 1 mi. long?
- 2. Find the amount of lumber in a 2-ft. board walk around a flower bed 12 ft. long and 10 ft. wide.
- 3. How many bushels of oats (32 lb. to the bushel) are there in a load weighing 900 lb.?
- 4. A grocer bought 3 bbl. of flour at \$6 a barrel, and sold it at 4 \notin a pound. How much did he gain?
- 5. In a block of marble 6 ft. long and 3 ft. square, how many cubic feet are there?
- 6. In a pile of wood 26 ft. long, 6 ft. high, and 4 ft. wide, how many cubit feet are there? How many cords?
 - 7. How much will 3 mi. of cable cost at 12 \(\eta \) a foot?
- 8. How many cubic feet are there in a stick of timber 32 ft. long, 2 ft. wide, and $1\frac{1}{2}$ ft. thick?
 - 9. In 352 yd., how many rods are there?
- 10. At 6¢ a pint, how much molasses can be bought for \$4.26?
- 11. What will be the cost of 2 bu. 1 pk. 6 qt. of timothy seed, at 10 \(\neq \) a quart?
- 12. How much will it cost to dig a cellar 24 ft. long, 18 ft. wide, and 6 ft. deep, at 27 \(\nothing \) a load?
- 13. How many boxes, each having a capacity of 12 lb., can be filled from a hogshead of sugar weighing 9 cwt.?
- 14. When 1 bu. of wheat makes 45 lb. of flour, how many 50-lb. sacks of flour can be made from 500 bu. of wheat?
 - 15. How many acres are there in a field 90 rd. by 75 rd.?
- 16. How many minutes more were there in the year 1600 than in 1700?

- 1. When a man sleeps from 10 P.M. till 6 A.M. daily until he is 75 yr. old, how many years has he spent in sleep?
 - 2. How many hours are there in 17 wk.?
- 3. When a wheel with a diameter of 2 ft. 4. in. revolves 3 times in 2 sec., how far will it travel in 2 hr.? (For practical purposes, the circumference of a circle equals 3\frac{1}{2} times the diameter.)
- 4. When wages are \$9 a week, how much is due a person who worked $\frac{1}{2}$ da. on Monday, all day on Wednesday, $5\frac{1}{2}$ hr. on Thursday, and $3\frac{1}{2}$ hr. on Friday? (9 hr. day system.)
- 5. When your wages are \$10 a week, what should you receive for 4 days' work?
- 6. How much is a 3-lb. 6-oz. steak worth at 24 \(\nu \) a pound?
- 7. How many acres are there in a field 80 rd. long, 50 rd. wide at one end, and 30 rd. wide at the other?
- 8. How many cubic feet of space are there in a tank 3 yd. long, 2 yd. wide, and 4 ft. deep?
- 9. What is the value of a stick of ship timber 60 ft. long, 2 ft. 6 in. wide, and 1 ft. 8 in. thick, at \$30 per thousand (M) square feet? How much would it cost at 36 \(\neq \) a cubic foot?
- 10. Since a cubic foot of ice weighs 60 lb., how many tons of ice can be taken from a pond 100 ft. wide and 200 ft. long, when the ice is 6 in. thick?
- 11. How many cans holding 5 gal. 1 qt. each, can be filled from a 63-gal. hogshead of kerosene?

FORMS OF CHECK, NOTE, AND DRAFT REDUCED IN SIZE

No. 329.

Date, x/1, '04.

Name, G. Thompson.

For Mdse.

Amount, \$400.

Deposit,

Balance, \$785.

No. 329.

New York, Qet. 1, 1904.

National Exchange Bank

Pay to the Order of George Thom/pson

no Dollars.

William J. Forbes.

STUB

CHECK

No. 27.
Date, xii/5, '04.
Name, Smith & Wilcox.
For 200 bu. Wheat
Amount, \$180.
Interest, 6%.
Date due, Jan. 4,'04.

STUB

PROMISSORY NOTE

Chicago, Ill., full 1, 1904. No. 378. No. 378. Date, vii / 1, '04. At Sight pay to the order of For Hastings & Brooks. To Phillips & Co. One thousand 🚟 Dollars, Amount, \$1000. and charge to Exchange, 25%. Howard Bros. To Phillips Interest, None. Time, Sight,

STUB.

SIGHT DRAFT ACCEPTED

GOVERNMENT

RIGHTS OF THE CITIZEN

In our country, the people rule themselves. They govern themselves by electing officers to serve them. Each citizen is equal in his political rights with every other citizen. No man inherits any kind of office from his father. He may



THE CAPITOL AT WASHINGTON

inherit property, but nothing else. Among the equal rights of all citizens are to think, to speak, to write, and to act freely, to live where one chooses, to buy and sell property, to produce almost anything one chooses, to hold public office, and to vote for the officers of the government. Upon being charged with crime, an American has the right to be considered innocent until proved guilty in court. He has the right to a jury trial and to have a lawyer defend him.

Except for such crimes as arson, murder, and treason, when there are many facts against him, no American can be put in prison without being first heard in his own defense by a judge of court. Even when accused of the worst crimes, by reason of the *habeas corpus* law, he has the right to a speedy trial before a jury of his equals. When charged with minor crimes, he may be released on bail pending trial.

Every citizen has the right to be protected by the police or militia from assault and battery. His property must also be protected.

The citizen is a free man; his house must not be searched or even entered except by due warrant of law, which protects him from personal harm.

THE DUTIES OF THE CITIZEN

It is the duty of the citizen to take up arms for his country when it is invaded by foreign enemies or when domestic peace is broken by riot and mob violence. As the citizen has the right to be protected from others who would do him harm, so he has the duty of protecting others from harm. When summoned, it is the citizen's duty to serve on juries for the trial of criminal offenses.

DUTIES AS A VOTER

Morally, it is the duty of the citizen to vote at all elections and to attend the party primaries in which candidates are nominated for office. It is his duty to vote intelligently upon public questions.

To do this, he needs to study the history of our country, the principles of our government, and the actual questions presented at election time.

PUBLIC OFFICE

It is the duty of the citizen to take public office when regularly nominated and elected to such office.

It is good government in America that makes property secure and valuable; and it is the duty of a citizen to serve that government, when requested to do so by a majority of his fellow-men, in any office for which his talents fit him, unless some other and greater public duty already claims his time and effort.

PUBLIC ZEAL

It is the duty of the citizen to resist all acts and measures by which the general good of the people is likely to suffer or by which the rights of any of his fellow-citizens are infringed. It is his duty to know the main facts regarding government, its officials, its expenditures, and its policies.

CITIZENSHIP

The term *citizen* means any person — man, woman, or child — born in this country, or any person who has been naturalized in this country. As far as property holding is concerned, women have nearly the same rights as men. Children, as well as men and women, have the right to the protection of our flag, wherever they go, in any part of the world. All citizens have equal rights to the protection of their property and their person.

QUALIFICATION OF VOTERS

Not all citizens, however, are given the right to vote. In most of the states the only voters are male citizens who are over twenty-one years of age. But in Colorado, Wyoming, Utah, and other western states,—about one fourth of all the states in the Union,—women over twenty-one years of age, as well as men over that age, may vote and hold office.

In some states, including Massachusetts and Connecticut, not all men over twenty-one years of age may vote, but only those who have certain qualifications in the way of education. In many states, women may vote on questions concerning the public schools. Usually one year's residence within a state is required before a citizen of another state may vote in the state into which he has moved.

THE STATES AND DEPENDENCIES OF OUR NATION

	1910 Populat'n	AREA		1910 Populat'n	Area
The United States (including Alaska, Hawaii, and Porto Rico, but not the Philippine Islands¹). Continental U. S. New York Pennsylvania Illinois Ohio Texas Massachusetts Missouri Michigan Indiana Georgia New Jersey California Wisconsin Kentucky Iowa North Carolina Tennessee Alabama Minnesota Virginia Missisippi Kansas Oklahoma Louisiana	93,402,151 91,972,226 9,113,614 7,665,111 5,638,591 4,767,121 3,366,416 3,293,335 2,810,173 2,700,876 2,609,121 2,537,167 2,337,549 2,333,860 2,224,771 2,206,287 2,184,789 2,138,093 2,075,708 2,061,612 1,797,114 1,690,949 1,656,388	49,204 45,126 56,665 8,266 69,420 57,980 36,354 40,598 42,022 51,998 42,022 51,998 42,022 42,627 46,855 70,557	Colorado Florida Maine Oregon South Dakota North Dakota North Dakota North Dakota New Hampshire Montana Utah Vermont District of Colum-	1.574,449 1.515,400 1.295,346 1.292,1119 1.192,214 1.114,1900 1.118,012 1.114,756 779,024 752,619 742,371 672,765 583,888 577,056 542,610 430,572 376,053 373,351 355,956 321,594 204,354 202,322 202,322 202,322 202,325 81,875 64,356 54,356	53,335 30,989 12,327 24,170 77,520 69,127 3,435 4,965 103,948 58,666 33,699 77,615 70,837 1,248 9,341 146,57 28,990 9,564 113,956 2,370 62,370 69,791 110,690 590,884

¹ The Philippine Islands have about 9,000,000 population and 115,026 square miles.

² Not a state.

LAWS OF NATURALIZATION

Our country introduced a new principle in international affairs by permitting the natives of other countries to come here and to be naturalized as citizens. The laws with regard to naturalization are not uniform in all the states. At least five years' residence in the United states is usually necessary, together with a declaration of intention to become a citizen two years before the citizenship papers are issued. Once naturalized, the foreign-born citizen has the same rights as the native citizen, with the single exception that he cannot be elected president of the United States. To secure naturalization, the foreign-born resident must go before the town or city clerk or the clerk of a regular court or some other official, designated by law for the purpose, and take out papers declaring his desire and intention to become a citizen.

Usually several years later, the foreign-born resident takes his declaration and goes before a judge of court and gives an oath of allegiance to the state and nation. In the New England States, the town selectmen have charge of the making and registration of voters.

The United States Government at Washington has a Bureau of Immigration and Naturalization that answers all questions upon this subject and directs inquiries what to do in order to become citizens in each and every State.

THE BALLOT

Elections are held in accordance with regular provisions of the Constitution of the United States and of the Constitution of each particular state.

In many states, the ballot is now secret, so that no influence can be brought to bear upon the voter by an employer, a creditor, or any other person. The counting of ballots is

done with scrupulous accuracy and honesty by officers chosen from all the parties with candidates for the offices voted upon.

VOTING MACHINES

In order to make voting quicker and the counting accurate and free from fraud, many cities have adopted, in place of the ballot, secret voting machines, of highly ingenious construction.

OFFICEHOLDING

A successful candidate for office enters upon the duties of that office in accordance with the requirements of the constitutions and laws of the nation and state. His first duty is to inform himself as to the duties of the office and as to the condition of its business affairs. It is then his obligation to his constituents, who include those who voted against him as well as those who voted for him, to perform the duties of his office for the best welfare of his whole community. Once an officeholder, the public business of a citizen should be held above any kind of private business in which he may be interested. Good government depends quite as much upon good men in office as upon the laws that they are elected or appointed to carry out.

TOWN OR TOWNSHIP MEETING

In the New England States and in certain other states, town meetings are maintained to carry out the principles of pure democracy; that is, to bring the government as near the people as possible. At these town meetings, annual and special, the citizens discuss and settle, usually by ballot, all local public measures. In great cities, meetings of all the interested citizens in one place are impossible.

COUNTY GOVERNMENT

The powers of county government and of local government differ greatly in various parts of the country. The county in the North is of much less importance than it is in the South. Generally, counties have charge of the roads, the hospitals, the paupers, and the criminals. In the South, they often take charge of the public schools also. One of the important county officers is the sheriff, who has charge of the county jail and otherwise enforces the laws.

CITY GOVERNMENT

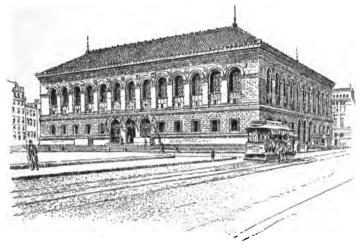
Cities usually grow from towns. When the town government has become unsatisfactory to a community, a city may be established either in accordance with the general state laws or in accordance with a specific charter granted by the state. Usually, cities undertake, in addition to the governmental duties of towns, some of the duties of counties. Occasionally, a city is partly within one county and partly within another. Usually, however, like the town, it is within the county jurisdiction. The large cities must have streets paved with stone, brick, or asphalt, and sewers carrying off the waste of households and of factories. They must have a large police force. They need such public buildings as city halls, hospitals, firehouses, libraries, and great school-houses.

COMPLEXITY OF CITY GOVERNMENT

The departments to be administered by a modern city government are so numerous as to make a business quite as complicated as that of the greatest commercial enterprises.

Large cities raise by taxes many millions of dollars a year,

all of which should be expended wisely. The city has hundreds and even thousands of employees, such as school teachers, firemen, and policemen; and these employees range in ability from the common unskilled laborer to the chief of police, the expert city engineer, and the school superintendent.



PUBLIC LIBRARY, BOSTON

SCHEME OF CITY GOVERNMENT 1

MAYOR BOARD OF EDUCATION PUBLIC LIBRARY BOARD ROARD OF HEALTH Board of School Estimate Medical Inspectors City Engineer Teachers Librarians Tax Assessors Janitors Books City physician Board of Tax Relief Schools Library building Hospital Overseers of the Poor Police

Firemen

¹ Some of the main items in the government of Paterson, N. J. Besides these, there are many other boards, officers, and committees.

BUSINESS OF CITY GOVERNMENT

The city touches the life of the individual American at many points. It educates him in the public schools; if he is poor, it cares for him in sickness; it protects him in his person and property; it looks out for his health by the various resources of the health department and by city ordinances relating to garbage, sewers, and public nuisances; it licenses the drivers of vehicles that transport him and his goods; it maintains firemen and fire apparatus to protect his home from destruction by fire; it lends him books at the public library; and if he dies penniless, it buries him decently in the public grounds of the cemetery.

MAIN OFFICERS OF STATE GOVERNMENT 1

Governor.

Treasurer.

Attorney-general.

Senators

in the Legislature.

Representatives

Judges — in the Courts.

Commissioners of the Insane.

Keepers of the Penitentiaries.

Members of the Board of Education.

Commissioner of Education.

Members of the Board of Taxation and Relief.

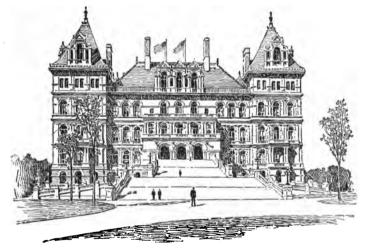
STATE GOVERNMENT

The state by its legislature determines most of the rights and duties of the citizens.

It determines the religious rights of the citizen; it pro-

¹ As in New Jersey.

vides for his education; it regulates the ballot; it prescribes the rules of marriage, and the legal relations of husband and wife and of parent and child; it defines what power the employer has over his employee, the master over his servant, the business man over his agent; it regulates the affairs of partners, of debtors, and creditors; it makes the laws for the inheritance of property, for its sale and purchase, and for



CAPITOL BUILDING, ALBANY, N.Y.

the renting and leasing and mortgaging, of property; it decides the conditions for business contracts and for the hiring of labor; it enforces nearly all the laws regarding crime and civil injuries between man and man; it legislates regarding the poor and the insane, and takes care of criminals convicted of serious offenses; it requires the building and maintenance of roads and schools; it decides upon what conditions corporations may be established, — municipal, public, and private.

extended powers. The highest court is chiefly engaged in trying cases in which appeals have been taken from the decisions of the lower courts.

It has the duty of interpreting the state constitution and of deciding whether the laws passed by the legislature are or are not constitutional.

BOARDS

In addition to these three regular departments of the state government, there are usually various commissioners appointed by the legislature or by the governor for various purposes, such as the State Board of Education and the State Board of Health, whose duties are indicated by their titles.

GOVERNMENT OF TERRITORIES

All of the states of the United States, except the thirteen "Original States" (including Maine, Vermont, Kentucky, and West Virginia), and California and Texas were territories before they became states.

A territory is ruled by a governor who is appointed by the president of the United States, with the consent of the Senate, but it elects its own legislature and sends to Congress its own delegate, who has the right to serve upon committees and to speak in general debate, but not the right to vote.

GOVERNMENT OF DEPENDENCIES

In addition to the territories (and to the District of Columbia, for which Congress acts as the city council and the president somewhat as mayor) there are now several colonies belonging to the United States. The most important of

these are Porto Rico and the Philippine Islands. Each of these dependencies is governed partly by officers appointed by the president with the concurrence of the Senate of the United States; but the people elect one house of the legislature, and so have a share in making the laws.

NATIONAL GOVERNMENT

Over all the states, territories, and colonies is the National Government, which, like the state governments, consists of three branches, — legislative, executive, and judicial.

CONGRESS

The legislature of the United States is composed of two houses, the Senate, and the House of Representatives. two houses together are called the Congress, or the meeting of the delegates from the different states. Congress makes the laws, subject to veto by the president. This veto may itself be annulled by a two-thirds vote of both houses of The powers and duties of Congress are prescribed by the constitution of the United States. All powers and duties not expressly given to the Federal government by the constitution are reserved to the states. The Congress has, however, many very important powers, such as providing for the national defense in time of war, coining money, and fixing the standards of weights and measures, maintaining the national mail service, borrowing money, and levying and collect-The president and the Senate together make treaties with foreign nations and appoint officeholders to many offices. Most of the national office appointments are made now in accordance with civil service provisions, requiring proof of special fitness by competitive examinations.

SENATORS AND REPRESENTATIVES

Senators of the United States are elected by the people of the different states. Each state sends two senators. Members of the House of Representatives are elected by districts, each state having one or more representatives in proportion to population. Each territory sends a delegate. There are now more than four times as many representatives as senators in Congress. Each member of Congress gets the same salary, \$7500 a year, while the president gets \$75,000.

UNITED STATES COURTS

The courts of the United States include the Supreme Court and many lower courts. These courts deal with questions of law arising between citizens of the different states. As with the Supreme Courts in the different states, so with the Supreme Court of the United States, the most important duty is to tell the meaning of the constitution in respect to the laws. The Supreme Court of the United States is the most powerful law court in the world, for it decides whether a bill passed by Congress or by any one of the States is or is not in accordance with the constitution; and when it is not in accordance with the constitution, the Supreme Court will not enforce it as a law. In all other nations, the monarch or the legislature is higher than the highest court.

Therefore, the Supreme Court of the United States, with its nine justices, is really supreme, and it sometimes makes very important decisions. But amendments to the constitution may be proposed by Congress or by a convention of delegates from all the states; when ratified by the legislatures or by conventions in three fourths of the states, these amendments become valid as parts of the Constitution. Justices of the Supreme Court are appointed by the presi-

dent, by and with advice and consent of the Senate. The chief justice receives \$15,000 a year as salary; the other justices, \$14,500.

Many circuit and district courts are also maintained by the National Government.

THE PRESIDENT AND THE CABINET

The president is at the head of the executive branch of the government. His term of office is usually called "an



STATE DEPARTMENT BUILDING, WASHINGTON

administration." For convenience, the administrative branch of the National Government is divided into ten departments with a secretary at the head of each. The ten secretaries form the cabinet of the president. Like the justices of the Supreme Court, these secretaries are all appointed by the president, by and with the advice and consent of the Senate.

They have no powers in their departments other than those delegated to them by the president. Their two general duties are to carry out his directions in relation to their departments and to advise him regarding the affairs of their own departments and of the government as a whole. The ten departments are State, Treasury, War, Justice, Post Office, Navy, Interior, Agriculture, Commerce, and Labor. Each secretary receives a salary of \$12,000 a year.

BUSINESS OF THE DEPARTMENTS

The State Department deals with the international affairs of the United States, arranges treaties, maintains diplomatic relations with foreign nations and protects our citizens when traveling abroad.

The Treasury Department deals with the money affairs of the government, regulates the national banks, and collects the customs duties upon imports.

The Department of Justice, presided over by the attorneygeneral, takes charge of the legal matters in which the United States is concerned.

The Department of the Interior has charge of pensions, public lands, Indian affairs, patents, education, and the geological survey.

The Post Office Department manages the national mail service, which extends to every city, town, and hamlet of the land, and communicates with foreign countries.

The duties of the Departments of War, of the Navy, of Agriculture, of Commerce, and of Labor are those suggested by their titles.

These various departments govern this nation of 100,000,-000 citizens, with 9,000,000 colonists and other dependents, in many ways not stated here.

TAXES

Most of the revenue of the United States is derived from the taxation of merchandise of various kinds. Taxes are levied upon many kinds of imported goods at the seacoast cities of the East and West, and at the land borders north and south of the United States. Taxes are also levied upon beer, whisky, and tobacco manufactured in the United States.

Minor taxes are raised by imposts and tariffs levied in various other ways. The National Government spends about \$1,100,000,000 every year, of which nearly three fourths go to the army, the navy, and pensions.

PRESIDENTIAL ELECTION

The president of the United States is elected by an Electoral College whose members are called "electors" and are chosen every four years. Each state has as many electors in the Electoral College as it has senators and representatives together. Electors are nominated by party conventions held in the states for that purpose. The names of the state electoral candidates of each party are printed on the ballot under the name of the party, and are voted upon by the people. Those candidates who receive the greatest number of votes are elected, and are expected to vote in the following January for the presidential and vice-presidential candidates of the party that the electors represent.

THE NATURE OF OUR GOVERNMENT

The United States government is like a board of arbitration to maintain perpetual peace between the different states. For the sake of this perpetual peace and of free trade among themselves, the states have surrendered to the central government various rights belonging only to independent nations.

DEMOCRACY AND FREEDOM

A citizen of the United States is a voter in his town or his municipality, in his county, in his state, and in the nation. Often, he is a voter in a school district separate from his municipality. He is partly a subject and partly a ruler in four or five governments, one within another.

DUTIES OF PUBLIC OFFICERS

When a man is installed in office, he takes charge of the duties of that office. In cities, the voters deal with matters



PUBLIC SCHOOL, NEW YORK CITY

of local affairs; in counties and states, with matters of state law; and in the nation, with matters of national law. A city alderman or a councilman votes regarding ordinances and resolutions to govern the city. The treasurer takes charge of the public funds. The commissioners of charity take charge of the poor. The police board selects and manages the policemen. The board of education selects the superintendent of schools and makes rules to govern the schools.

The mayor is head of the general city government, and carries out the laws.

PUBLIC SCHOOLS

Every state has established a system of public schools. These schools are entirely free to all children without regard to race, color, or religion. More than this, in many states, laws have been made compelling all children between certain ages to attend some school. When children do not go to school, the parents are held responsible. The parents may be arrested, taken before a magistrate, and punished for neglecting to do their duty.

SCHOOL FUNDS

The expense of carrying on the public schools is met largely by taxation. Every citizen is taxed according to the amount of property that he owns. It often happens that a man is taxed large sums of money for education when he has no children at all. But this makes no difference, as the object is the education of all for the general welfare. Nearly every state has a school fund, which is derived from a certain part of public lands reserved for that purpose. The money from this fund is divided among the school districts in proportion to the number of school children in each.

STATE SUPERINTENDENT OF SCHOOLS

In many states, there is an officer known as the State Superintendent of Schools. It is his duty to control the schools of the state and to suggest improvements to the state legislature. There are sometimes county superintendents to aid him in his work.

BOARD OF EDUCATION

Each school district is in charge of a board of education, the members of which are elected by the voters of the district. In most states, boards of education have power to employ teachers, build schoolhouses, and buy text books and supplies. In other states, their powers are not so great, but are divided among several governing boards.

OUR IMMORTAL PRESIDENTS

By reason of the office, the most prominent American is that one of our citizens who is president of the United States. Among all these great men, we have come to a common agreement that two are incomparably highest in



GEORGE WASHINGTON

rank, George Washington, hero of the War of Independence, 1775–1783, and first president, whom we affectionately call "The Father of His Country"; and Abraham Lincoln, president during the Civil War, 1861–1865, whom we call even more affectionately "Honest Abe" and "Father Abraham."

Other great men who have been our presidents were (1) Thomas Jefferson who in 1775 wrote the Declaration of Independence and in 1804 bought the vast Louisiana Territory beyond the Mississippi from Napoleon Bonaparte, ruler of France; (2) Andrew Jackson, hero of the War of 1812 with Great Britain and a statesman who believed vigorously in the rights of the common people; and (3) Ulysses S. Grant, hero of the Civil War, who was greater as a general than as chief magistrate.

OTHER IMMORTAL AMERICANS

One of the greatest of Americans was Benjamin Franklin, who persuaded France to help our country in the War of



ABRAHAM LINCOLN

Independence and who was also a famous scientist, business man, and writer.

Every American should know something of Henry Wadsworth Longfellow, the poet; of Harriet Beecher Stowe, the novelist; of Ralph Waldo Emerson, the philosopher; and of Thomas Alva Edison, the inventor.

THE PRESIDENTS

	Party	TERM	State
George Washington	No party	1789-1797	Virginia
John Adams	Federalist	1797-1801	Massachusetts
Thomas Jefferson	Republican 1	1801-1809	Virginia
James Madison	Republican 1		_
James Monroe	Republican 1	1817-1825	Virginia
John Quincy Adams	Republican ²	1825-1829	Massachusetts
Andrew Jackson	Democratic	1829-1837	Tennessee
Martin Van Buren	Democratic	1837-1841	New York
William Henry Harrison	Whig	1841	Ohio
John Tyler	Whig 3	1841-1845	Virgin i a
James Knox Polk	Democratic	1845-1849	Tennessee
Zachary Taylor	Whig	1849-1850	Louisiana
Millard Fillmore	Whig	1850-1853	New York
Franklin Pierce	Democratic	1853-1857	New Hampshir
James Buchanan	Democratic	1857-1861	Pennsylvania
Abraham Lincoln	Republican	1861-1865	Illinois
Andrew Johnson	Republican 4	1865-1869	Tennessee
Ulysses Simpson Grant	Republican	1869-1877	Illinois
Rutherford Birchard Hayes	Republican	1877-1881	Ohio
James Abram Garfield	Republican	1881	Ohio
Chester Alan Arthur	Republican	1881-1885	New York
Grover Cleveland	Democratic	1885-1889	New York
Benjamin Harrison	Republican	1889-1893	Indiana
Grover Cleveland	Democratic	1893-1897	New York
William McKinley	Republican	1897-1901	
Theodore Roosevelt	Republican	1901-1909	New York
William Howard Taft	Republican	1909-1913	Ohio
Woodrow Wilson	Democratic	1913-	New Jersey

¹ Sometimes called Democratic-Republican — the party from which the Democratic party of to-day claims descent.

² At the time of John Quincy Adams's election, political parties were disorganized. He called himself a Republican; but his doctrines were Federalistic.

³ An anti-Jackson Democrat elected on the Whig ticket.

⁴ A Union war Democrat elected upon the Republican ticket.

PHYSIOLOGY AND HYGIENE

THE HEALTH AND STRENGTH OF THE BODY

The human body is made of bones and flesh. The bones are connected together in the framework of the body, and are called the skeleton. The flesh has many different parts, — among them muscles, fat, nerves, blood vessels. We are probably healthy when our bodies are working well, and we feel no pain anywhere. We are certainly strong when we can lift great weights and work or play hard many hours each day.

How the Body Lives.—The human body gets its life from food. It is a chemical organism that burns food at a certain temperature. To be well, the internal temperature must be 99° Fahrenheit. When the heat falls 1° below or rises 1° above this point, the body becomes ill, and one feels cold or hot. 104° is a high fever, and means delirium. 108° brings on coma, and almost always death. Few whose temperature once gets down to 95°, ever recover.

It is food also that in its metabolism (digestion and assimilation) is converted into the flesh and bones that one sees.

The Need of Sleep. — These human bodies of ours may keep awake about two thirds of the time; but one third of the time we should pass in sleep. This means that when we are full-grown men and women, we need to sleep about eight hours in every twenty-four. But youth from fourteen to twenty years of age should sleep nine hours every day, and children from thirteen years down require, in order to grow and to keep well, ten hours of sleep. Babies and little children thrive only when they can sleep at least half of the time every day.

When possible, it is best to sleep twice every twenty-four

hours, though not in equal amounts of time. A nap just before the evening meal is good for almost every one, though often those who need it most cannot take it. All persons who cannot take an afternoon nap should try to go to bed early and to get extra rest regularly Saturday or Sunday, or upon some other day of every week.

What Sleep does for us. — Of all the requirements of human beings to be well and strong, sleep is by far the most important. Sleep protects against insanity and disease. It refreshes from fatigue and worry. Those who sleep well in good, fresh, clean air, for a long enough time each day to get thoroughly rested, seldom catch disease. Sleep wards off disease, and is the best of all medicines. In sleep the blood circulates freely through the body, for one is lying down and is not wearing tight clothes. And the blood cleans and renews the tissues of the flesh, and brightens one for the new day.

Fresh Air in Sleeping Rooms. — We should sleep in rooms with the windows open and with fresh air coming in all night long. In winter, we should keep warm by having plenty of clothing upon the bed. The cold air is good for our lungs, and makes us breathe strongly. Except for weak, frail, or old persons it is better not to have much heat in the bedroom at night. Air contains a gas called oxygen, which burns in our blood, and the burning makes us warm. It is better to be warm from fresh air and good food than from heat that comes from burning wood and coal.

Why we need to bathe often. — Next after sleep, bathing is important. Those who intend to be well and strong must keep the skin clean and the pores of the skin open and active. There is only one way in which to do this; and this way is to wash the body often, rubbing the skin well. It is not enough to wash one's face and hands. On these exposed

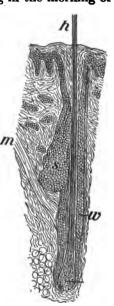
surfaces of our bodies, dirt collects from the outside so that we cannot help seeing and feeling it. But it is just as necessary to wash the parts under the clothing, for every minute, all day and all night long, the blood from within is bringing to the surface of the skin worn-out tissues and used-up fluids. which we must wash and rub off in order to be clean and well.

We should bathe all over at least several times every week. and preferably every day, either on rising in the morning or

before retiring at night. It is pleasant and convenient to have tubs for bathing all over; but it is not necessary, for with a bowl or basin and plenty of water in pitchers, very many persons take complete baths every day.

As for rivers and ponds, lakes and ocean, the best use to which we can put them in spring, summer, and fall is to go swimming in them, — as every well-constituted boy knows. At least once a week, we should wash the body all over using pure soap with hot water.

The Skin. — The skin is composed of several kinds of tissues in which there are sweat and oil glands and hair follicles, nerves, arteries, veins, and capillaries for the blood, fat cells, and muscle Section OF THE SCALP, The surface is called the epidermis, below which is the dermis.

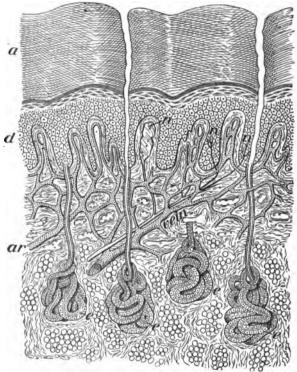


MAGNIFIED. h, hair; w, hair sac; s, oil gland; m, muscle.

The hair and nails are outgrowths or appendages of the skin. The picture on this page shows a section of the scalp very much enlarged. On the next page you may see a section of the skin also much enlarged.

SOMETHING ABOUT FOOD

Different Persons require Different Foods. — Most Americans eat three times daily, — breakfast, dinner, and supper,



A THIN SLICE THROUGH THE SKIN.

a, dead part; d, live part of the epidermis; ar, artery; e, sweat glands; n, nerves.

or breakfast, lunch, and dinner. Others prefer four meals, while a few take but two meals daily. What one should eat, in order to keep well and strong, depends mainly upon three different things, which are:—

First, the climate and the season; Second, the occupation; and Third, the age.

The climate and the season make the general weather. Those who live in much wet weather need different food from those who live in dry weather; and those who must endure very cold winters need different food from those who live most or all the time in places with warm weather. Some foods warm us greatly, other foods warm us little or almost none. Some foods make us lazy, others make us excitable.

In some occupations, muscle tissue is worn out fast. In other occupations, nerve life is drained. In still other occupations, there is a general exhaustion of all kinds of life. Some occupations are carried on out of doors, others indoors, still others have a variety of outdoors and indoors. Some occupations keep persons always on the move, other occupations are sedentary. Different diets are required for these different conditions. In all these matters, we need to remember that the effect of a good meal lasts two or three days, while lack of food is felt at once.

There are many very, very hard occupations. Among these are driving or firing on a steam locomotive engine, being a motorman on a trolley car, coal mining, cattle tending, performing the duties of the family physician, teaching large classes in the public schools. Long hours, indoor confinement, routine work, cramped positions, anxiety, and underpay make almost any occupation hard.

The baby needs different food from the grown man, as every one knows; but the growing child also needs different food from the father and mother. And all of them require to mewhat different food from the aged grandparents.

CHANCELLOR - SHORT COURSE - 16

The Several Kinds of Food.—The foods that cost most are not the best. There is no better general winter food for all ages and occupations than oatmeal and milk; but oatmeal is a cheap food, and milk is not among the foods that cost most. And yet oatmeal is not a good summer, or hot weather, food. Perhaps the best general food for all climates, seasons, and occupations is whole wheat bread. In the form of toast, soaked in warm water with salt and butter, whole wheat bread is a very good food for small children.

There are three general kinds of food, — muscle-building, heat-making, and health-storing. They have special names, — pro'te-ins, sugars, and fats. Good meat is rich in proteins and fats.

The best meat for men is mutton. Those who do much work with their muscles usually require some meat daily. Pork is very rich in fats. Beef is mainly protein. Those who have much brain work to do, or who undergo nervous strain, usually need beef, lamb, or mutton once a day, especially in winter. Pork is a good food for those who work hard outdoors all the year.

The cereals that are made into breakfast foods and into bread, cake, and pastry are different from one another in their food values. Corn is the most heating, rye the least. Barley with white of egg has kept many a baby alive for months at a time until, with change of weather, it could take more nourishing food, for these are not so much tissue-builders as nerve foods. Oats contain a greater variety of food elements than any other cereal; and because of the proportion of these elements are especially good for children and youth. Rice is a good food for babies, for children, for invalids, and for aged feeble persons.

Fish and lobsters, oysters and clams are appetizing but

not highly nutritious foods. They are good for invalids and for sedentary indoor persons.

Except upon the seacoast, all sea foods are relatively costly, providing but little nourishment for the money paid.

Vegetables are good for us because they contain the sugars or starches that we need and because they give bulk to a meal, for we must not eat our food in too condensed forms. They also contain appetizing juices and tissues that help us eat other foods.

Even more than vegetables, fruits are important for their sugar and their appetizing juices.

Nuts are very rich foods, containing proteins, fats, and sugars. But they are too condensed to be eaten for entire meals with nothing else.

The eggs of hens, ducks, turkeys, and geese are also rich foods, containing proteins and fats. The white of egg is a protein, called albumen.

The flesh of these fowls is not so nutritious as the flesh of cattle, sheep, and pigs.

Milk, butter, and cheese are all relatively inexpensive foods. Milk is a perfect food, butter makes fat and heat, cheese builds muscle.

Sugar, molasses, and sirup are good winter foods.

Cookery of Foods.—Quite as important as the material of foods is the cooking of them. Steaks and chops should be broiled, not fried. Rare meat costs less to cook and is far more nourishing than overdone meat. Spare the lard, spare the fire, spare the spices, are three good rules.

Variety is desirable. Cleanliness is necessary. The ability to adapt one's diet to the work he must do is highly creditable to the one who orders the meals.

Cheap food properly cooked is far more serviceable than dear food badly cooked and served.

Changes of Food. — Overeating is a little more dangerous than too little eating. Old persons and sedentary workers especially should avoid overeating. In the spring when the weather changes from winter we should all reduce our diets accordingly.

A good winter day's dietary ¹ for a strong young man or woman engaged in manual labor is this:—

Breakfast. — Oatmeal and milk, mutton chop, baked potato, bread and butter, chocolate.

Cold lunch. — Egg sandwiches, of whole wheat bread, squash, pumpkin, or apple pie, potatoes, bread-and-jelly, bottle of milk.

Dinner. — Vegetable soup, meat stock, carrots, potatoes, beans, onions, fried hominy mush, bread-and-butter, broiled ham, custard pie.

Water and Milk. — Drink is almost as important to us as food. Indeed, water is more necessary than any food and is the best and the only necessary drink, for persons above sixteen years of age. Adults need to drink four or five pints of water each day. The one drink besides water that is good for almost all persons, whatever the climate, the occupation, or the age, is milk, — clean, fresh, undiluted, unskimmed milk, — with no preservative in it.

Tea and Coffee. — Tea is a stimulant. Coffee is a strong stimulant. They do not intoxicate, however, as do beer and other alcoholic drinks. But the less that children and youth

¹Cost of materials in New York city, 1911, about 35 cents. A vigorous workingman cannot be fed properly at lower cost.

City children at school should not have meat oftener than once a day; and no man, even in a winter lumber camp in Maine, benefits by meat oftener than twice a day.

have to do with tea and coffee, the better for their health. Tea and coffee check growth by reducing the appetite for nourishing foods. Next to milk, cold or warm, the best drinks are chocolate, cocoa, and mild lemonade with not too much sugar in it.

Candy and confectionery, when made of pure sugar, and eaten immediately after meals in but small quantities, in cold weather, are heat-producing foods. Eaten in large quantities in warm weather by persons who stay indoors, they induce disease, and are dangerous. The reason for this is that the liver, the largest internal organ of the human body, has three functions to perform,—to digest sugar and starch, to clean the blood of uric (or waste) acid, and to secrete bile for digestion in the alimentary canal. When the blood is overloaded with sugar from candy, the liver cannot perform all its work properly. Sugar in excess also bothers the kidneys, the brain, and the skin.

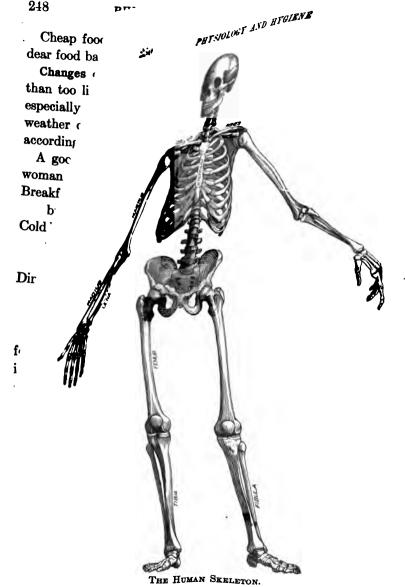
Alcoholic Drinks. — To beer, to whisky, to gin and rum, to any and all alcoholic beverages, there are three objections: —

First, they often "steal away men's brains." Taken in moderation, they do not make men drunk, but they do upset the judgment. Even very small amounts of alcohol make children and most women sick.

Second, they reduce the day's output of work. Men and women who live by piecework and those who are ambitious to rise to more important positions cannot afford to take any kind of stimulant.

Third, they do not repay value for money expended. Ale and wine and whisky cost money; and the man who drinks them gets nothing in return. They may be medicines, to be prescribed by doctors; but they are not economical foods.

At best, alcoholic beverages are nothing better than ex-



pensive luxuries; and at worst, they ruin good men and break up families.

SOME FACTS ABOUT THE BODY

The Skeleton. — The body grows and is renewed by sleep,

by bathing, by food and drink. Even the bones must be renewed from day to day. The body has about two hundred bones, large and small. The spinal column, which we often call "the backbone." is composed of twenty-four bones, one above another, like links in a chain. Each of these bones is called a vertebra. The head or skull also has twenty-four bones, and there are twentyfour ribs, making, with the breastbone, the chest. Each upper limb, with shoulder, arm, wrist, and hand, has forty-two bones, and each lower limb, with leg, ankle, and foot, has forty bones. Between the spinal column and the thigh bone of the leg is the hip bone.

Bone is made in part of mineral matter. in part of animal matter. Inside of the large bones is a canal or hollow in which is a fat called *marrow*. Live bone contains a network of blood and nerves.

The Muscles. — In the human body, there are many hundreds of different muscles. Some of them can be moved at will and are called voluntary muscles: but many of them move of themselves and are called involuntary muscles. The muscles of the arms and legs are voluntary. The heart is an involuntary muscle. The eyelid is both involuntary and volun-

THE THIGH BONK

тивопси THE MIDDLE.

b, hard bone; h, d, spongy bone; ma, marrow.

tary. The eyelid winks of itself, or we can wink it at will.

Muscle is made of fiber, in shape like a very, very thin little rod, from a quarter inch to two inches long. A dozen of these fibers are scarcely as thick as a hair.

Muscles enable us to speak, to move about, to digest our food, and to do many other things.

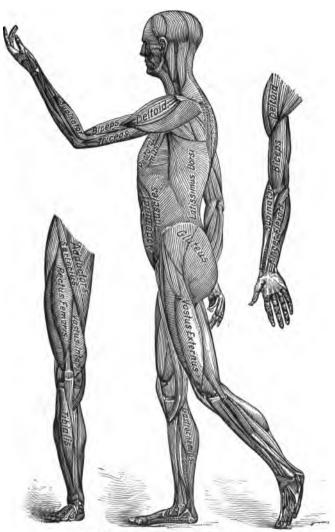
Systems of Organs. — Besides the system of bones and the system of muscles, the body has a system of digestive organs, a system of excretory organs, a system of respiration or breathing, a system of blood circulation, a system of lymph circulation, and a system of nerves.

Digestion.—The organs of digestion include the mouth and the teeth, the stomach, the liver, and the pancreas, and the intestines or bowels. Each of these organs secretes a special digestive fluid. We need to chew our food well in the mouth because the saliva secreted there is necessary to the digestion of the heat-making sugars and starches in the food.

Waste. — The organs of excretion or waste and cleansing include the two kidneys and the bladder, the liver, the large (lower) intestines, and the sweat glands of the skin.

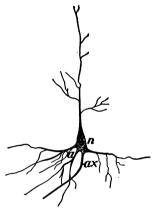
Breathing. — The two lungs, right and left, are the main organs of respiration or breathing. In them, the blood rids itself of a gas called carbon dioxid, which is the result of decomposing tissue, and gets fresh oxygen. In this process, the old blue blood turns to new red blood.

The Blood and the Lymph.—The system of blood circulation includes the heart, the arteries, the veins, and the capillaries. In this system flows the blood, which is our life current. The blood is a liquid in which are carried a vast number of little bodies called *red corpuscles* and *white cor-*



THE MUSCLES OF THE HUMAN BODY.

puscles and which also carries in solution a variety of mineral salts and other elements needed to keep the body alive. A



A NERVE CELL.

a, ax, branches of the nerve; n, nucleus of nerve cell.

man of ordinary size and weight, say, one hundred fifty pounds, has about six quarts or over twelve pounds of blood.

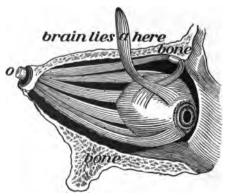
The lymph is the plasma or main body of the blood without the red corpuscles going from the arteries to the tissues of the flesh or coming from the flesh into the veins. It flows in ducts side by side with the veins and arteries and capillaries of the blood.

The Nerves.—The system of nerves in the human body includes the brain, the spinal cord,

the sense organs, and all the nerves that operate the muscles and other parts of the body. These are all closely connected

as part and parcel of the nervous system and life of the body.

The brain has three parts: the medulla at the base, the cerebellum at the back, and the cerebrum at the top. The cerebrum has two parts, or hemispheres. All of the brain is incased in

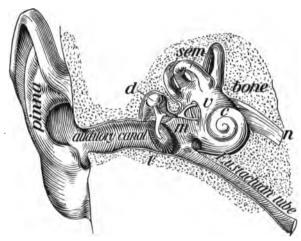


THE EYE WITH ITS MUSCLES.
o, the nerve of sight; a, one of the muscles of the eye.

bones combined in the cranium or skull, which protects it from injury.

The spinal cord is inside the spinal column, and from it radiate all the nerves by which the life of the human body is directed.

By means of the nerves and the directing brain, we think, feel, will, and do.



STRUCTURE OF THE EAR.

The Special Senses. — There are five commonly mentioned kinds of special sense organs, — for sight, for hearing, for touch, for smell, and for taste; but these are only a few of the many kinds of human senses. Among the others are the sense of fatigue, the sense of temperature, and the sense of pain. These tell us when we are getting sick, and we need to obey promptly what they tell us. There are thousands and thousands of sense organs in each human body.

EXERCISE

Without exercise, we cannot keep well. Exercise is needed to keep the blood in free and general circulation. This exercise should be general in order to stir up all parts of the body. The best of all exercises for grown persons is walking in the open air, rain or shine, winter and summer.

Especially do persons who work indoors at sedentary occupations need outdoor exercise. Such occupations include sewing and tailoring, bookkeeping, clerking in stores, and ordinary office work. Many a hard-working man or woman keeps fairly well largely because of taking a brisk ten minutes' walk outdoors every evening before going to bed.

In bathing and in rubbing dry after a bath, one can get much good exercise. The rubbing massages the skin and the flesh and thereby promotes the health of the body.

DISEASE

Each of these great systems—of bones, of muscles, of excretion, of breathing, of circulation, and of nerve action—has certain diseases to which it is liable. When we work or worry too much, eat too little or too much, sleep too little, exercise too little, bathe too seldom, we are inviting diseases. At some place or other, the body will break down, and disease will enter.

We may read too much in poor light, without glasses that fit us, and have eye strain. Poor food produces anæmia or poverty of the blood and nerves. Bad air without exercise leads to tuberculosis of the lungs, to pneumonia, and to pleurisy. Humanity is afflicted by many dreadful diseases that steal upon us like thieves in the night.

Germs. — Most diseases are caused by germs; some known

as microbes, being forms of animal life, and others known as bacteria, being forms of vegetable life.

These germs are exceedingly small; but they are also exceedingly prolific, multiplying very fast, and killing nearly every human being, soon or late.

PROTECTION AGAINST DISEASE

We can protect ourselves against disease in three ways. The first way to guard against disease is to keep healthy.

A person with good red blood is not liable to any germ disease. This does not mean that well persons never contract a germ disease, but that they seldom do.

The second way to avoid disease is to try to keep others around us well and to put sick persons in hospitals where they will not infect others, and where they will have the best opportunity to get well.

The third way to guard against germ infections is to use antiseptics. Of these, there are now many different kinds. These antiseptics are used in soaps for



TRICHINA GERMS, AS SOMETIMES FOUND IN THE MUSCLES OF A PERSON WHO HAS EATEN PORK NOT WELL COOKED.

washing, and in dilute solutions for spraying. They kill the germs; but, of course, it is better not to have any germs about ourselves, our houses, and our shops.

Cleanliness. — The germs live in filth and dirt. Hence, we must keep our bodies, inside and out, clean; — brushing our seeth daily and thoroughly, drinking clean, pure water to flush

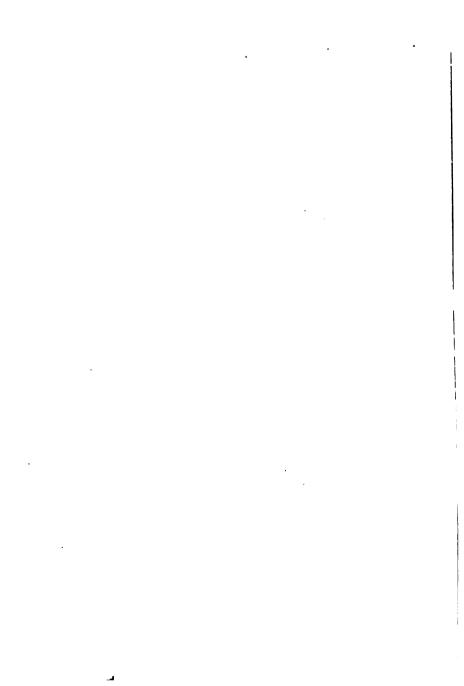
our bodies internally, and taking baths often. And we must keep our houses clean also, washing the floors with hot water and soap suds, washing also the windows and the woodwork often. For the same reason, we must keep our sidewalks, our streets, our stores, our factories, our yards, barns, and stables clean. It is not enough once in a while to clean up; we must keep ourselves and the things that belong to us always clean.

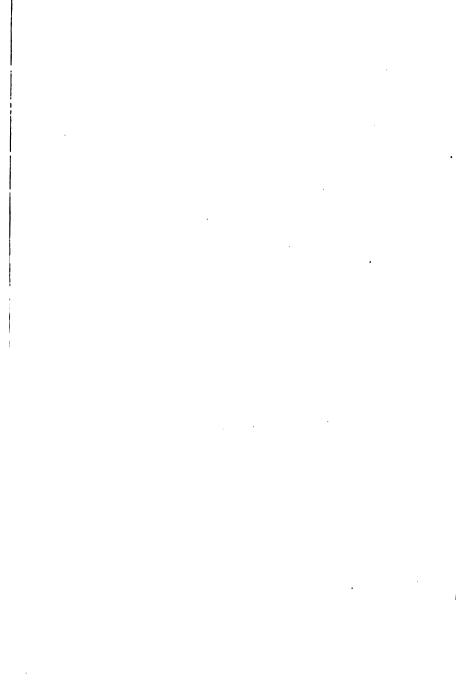
Germs also live in what should be the best of foods, — in milk and butter, in fish and meat, on bread, vegetables, and fruits. We must keep the flies out of our houses, for they carry germs. So also do mice and rats. Milk and other foods should be kept well covered and in cool places. Fruits and vegetables should be washed clean before being eaten; and all dishes used in cooking and in serving food should be perfectly clean.

Doctors and Medicines. — When we get sick or fear that we are going to be sick, we should get the doctor at once. Often, a doctor, called in early, saves us or our relatives from long and serious illness and perhaps from death. Only bitter, grinding poverty can excuse any one from calling the doctor promptly.

We should avoid patent medicines. Only doctors know what kind of medicine a person who is sick or beginning to be sick really needs. A medicine that would cure one kind of disease may intensify another kind; and a medicine that would cure a disease in a person of one kind of constitution may kill a person of a different kind of constitution, though affected with the same disease.

Doctors are health engineers to show us how to get well and to stay well. They know about health and diseases because they give all their time and thought to the study of the human body and its diseases. One of the important uses of the study of physiology in schools is to teach us the importance of promptly sending for the doctor when ill and of going to him for advice when not feeling well.





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